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WPB Issues New Order Controlling Paper

Director General of Operations Establishes Percentages of Production For Each Class of Paper — New Order Affects Converting Plants — Inventory Restrictions Included in New Method.

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., Jan. 13, 1943—WPB has changed its method of controlling production of paper, limited the used of paper in commercial printing, and the consumption of paper used by print paper book publishers and converters in a series of orders just issued by the Director General for Operations. At the same time new provisions and restrictions for the packaging of merchandise in paper board boxes were laid down for products sold at retail.

Order M-241, amended, controlling the production of paper, permits production for the first calendar quarter of 1943 of approximately 4,100,000 tons, an increase of 8% over the previous form of the order, which before amended permitted about 3,800,000 tons per calendar quarter.

This increase is required in order to permit expanded production of those grades containing waste paper and other waste or non-fibrous material. It is only a temporary measure to allow increased production in these grades pending balancing reductions in other grades.

Specific Provisions of Amended Order

Important specific provisions under the order as now amended are as follows:

(1) No production in any mill which has not been in production since August 1, 1942, without specific authorization by the Director General for Operations.

(2) Each mill is required each quarter to calculate its quarterly production quota by applying various percentages (between 80 and 100) to its production of each of the major classes of paper during the first six months ending March 31, 1942.

In general each mill's production is limited each quarter to its quota thus calculated, but a mill may produce within that quota any grade or grades desired, regardless of what it produced during the base period, provided the aggregate does not exceed the quota. In addition any mill may, over and above its quota, produce any quantity of any of several named grades especially needed for war and essential civilian supply.

The formula for calculating quotas, as prescribed in the order, requires the elimination of these special grades from the base period figure.

Production Fixed for Paper Grades

The percentages to be applied to production in each class, after thus eliminating the special grades, are set out on List A attached to the order, as follows:

Class of Paper or Paperboard	Percentage
Newsprint	90
Ground Wood	80
Book Papers	80
Writings	90
Wrapping Paper	85
Tissue Paper	100
Absorbent Papers	80
Container Board	100
Folding Box Board, etc.	80
Set-Up Box Boards, etc.	80
Cardboard	80
Special Industrial Boards	90

The unrestricted grades are set out on List B.

It is expected that the classification and percentages on List A, and the special grades on List B, will be changed from time to time as circumstances require.

Each manufacturer is further directed to reserve each month 2% of his quota for the calendar quarter within which the month falls for disposition by the Director General for Operations, in order to meet emergency orders, the prompt fulfillment of which is necessary to war or essential civilian supply. However, if he does not receive directions as to the disposition of this reserve on or before the fifteenth of the month, he may use it for his own business. The reserve, being 2% of the quarterly quota, will usually amount to about 6% of the month's production.

Order Includes Inventory Control

The amended order also contains fairly elaborate inventory restrictions. Inventories of newsprint are limited to 75 days. Inventories of other grades are limited to 60 days, with a special provision allowing paper merchants 90 days. Mill inventories are similarly restricted. These provisions are so worded, however, as to permit small inventories—i. e., two carloads—regardless of the numbers of days' supply they represent for the particular holder. Entirely

(Continued on page 16)

Board Issues Order For Cut in Newsprint

Canada's Rationing Plan Restricts Production to 90% of Average Between October 1941 and March 31, 1942 — Prices Board Sets Up Compensation Plan For the Industry — Other Details Given.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., January 11, 1943—While it had been assumed that newsprint rationing in Canada would follow upon the lines of that already announced in the United States, it was not until Friday last, January 8, that R. L. Weldon, newsprint administrator for Canada, made the definite announcement that production of newsprint here would be restricted to 90% of average deliveries between October, 1941, and March 31st, 1942. The formal order as issued by the Prices Board follows:

Order Issued by War Prices Board

The new Canadian order supersedes one issued by the Administrator on October 28 last restricting production to 100% of the average monthly quantity produced for sale within Canada or the United States from April 1 to September 30, 1942.

"The order prohibits delivery or acceptance of newsprint in any quantity which would increase the buyer's stock beyond 75 days' supply on the basis of current method and rate of operation or sale," the Prices Board said. "However, one carload or less may be accepted if it does not bring the buyer's inventory above two carloads. If a particular item of newsprint is under 30 days' supply, it may be delivered even though the gross inventory is up to or above the prescribed maximum."

No manufacturer, the order provides, "shall, without approval of the Administrator, fail or neglect to make delivery from time to time as ordered of newsprint paper to the extent that such manufacturer can do so within the scope of the general limitations on production imposed by this order and on the general basis of substantially equivalent treatment of such manufacturer's customers to any person to whom such manufacturer has supplied newsprint during the calendar year 1942."

Board Sets Up Compensation Plan

With the production-reducing order, the Prices Board has established a compensation plan for the industry. It provides for setting up of a special fund. Manufacturers who turn out more newsprint than their quota will pay into the fund, while those who turn out less will be compensated out of it.

Each newsprint manufacturer is assigned an established percentage of the total production under this plan. The percentages were worked out after consultation with members of the industry's advisory committee.

Following are the percentages:—Abitibi Power and Paper Company, Ltd., 13.01; Anglo-Canadian Pulp and Paper Mills, Ltd., 4.70; Bathurst Power and Paper Company, Ltd., 0.93; the Beaver Wood Fibre Company, Ltd., 0.60; J. R. Booth, Ltd., 0.30; Brompton Pulp and Paper Company, Ltd., 0.93; Canadian International Paper Company, 15.89; Consolidated Paper Corporation, Ltd., 12.90; Donnacona Paper Company, Ltd., 1.87; Donohue Bros., Ltd., 1.07; the E. B. Eddy Co., Ltd., 1.00; the Great Lakes Paper Company, Ltd., 2.76; Lake St. John Power and Paper Company, Ltd., 2.30; the James Maclaren Co., Ltd., 2.30; Mersey Paper Company, Ltd., 2.68; the Ontario-Minnesota Pulp and Paper Company, Ltd., 4.31; the Ontario Paper Company, Ltd., 4.28; Pacific Mills, Ltd., 1.85; Powell River Co., Ltd., 5.65; Price Brothers and Co., Ltd., 8.52; Provincial Paper Ltd., 0.12; Quebec North Shore Paper Company, 3.32; St. Lawrence Paper Mills Company, Ltd., 4.11; St. Raymond Paper, Ltd., 0.30; Spruce Falls Power and Paper Company, Ltd., 4.84.

Explains Transferred Tonnage Plan

The announcement said that in the case of "transferred tonnage"—newsprint tonnage which the administrator orders transferred by one manufacturer to another for production—the manufacturer who produces and ships it is to invoice it at full price to the transferring mill, which is to pay on or before the 25th of the month following invoice date.

Each manufacturer who produces and ships transferred tonnage is required when directed by the administrator to pay into or receive from the fund whatever amount is necessary to adjust the basic mill net price of the tonnage to the basic mill net price of the manufacturer's own tonnage of newsprint.

The order defines "basic mill net price" as that received by each manufacturer from his customer after deducting (1) all transportation and delivery charges paid by the manufacturer; (2) all storage and incidental charges paid by the manufacturer, in the case of water shipments, and (3) all up-charges or extra charges made by the manufacturer for newsprint other than standard white newsprint in rolls, as customarily wrapped for shipment to customers in Canada and the United States.

Contributions to the fund on account of tonnage in excess of established percentage are determined by a complicated formula. It is set forth in the order as follows:

"Such sum shall be the product of the average price per ton charged by the manufacturer for the newsprint paper invoiced to his own customers in such month multiplied by the number of tons of such excess tonnage, less an amount equal to the difference between such manufacturer's total costs of operation during such month and such manufacturer's total estimated costs of operation at the level of his established percentage including in both instances full allowances for depreciation and fixed charges." The amount to be received from the fund by manufacturers falling below their established percentage is similarly computed.

In determining the amounts to be paid or received, however, the administrator is authorized to consider gains or losses arising from the manufacture on newsprint machines of products other than newsprint paper with respect to the relative profits of such other products compared to newsprint and also any reduction in costs occasioned by operation at a rate below the established percentage.

KVP Buys Espanola Mill of Abitibi Company

Ontario Provincial Government Announces Sale of Idle Newsprint Mill to Kalamazoo Vegetable Parchment Co. for Approximately $1 Million Cash — Mill to Produce Sulphate Pulp After War.

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, January 11, 1943—Abitibi Power and Paper Company, Ltd., has sold its huge idle newsprint plant at Espanola, Ont., to the Kalamazoo Vegetable Parchment Company of Kalamazoo, Mich. The completion of the sale was announced yesterday by Hon. Norman O. Hipel, minister of lands and forests in the Ontario provincial government. The sale was made for all cash and is understood to be in the neighborhood of $1,000,000.

Espanola is in the Sudbury district, inland to the north of the north shore of Georgian Bay, and is a small community, depending largely on the Abitibi operations in the district. The late depression has not yet ended in the community because the Abitibi mill has been closed. Under the terms of the agreement of sale just consummated, the Kalamazoo Company agrees to convert the big newsprint plant into a sulphate pulp mill, just as soon as the war ends or as soon as priorities for materials can be obtained from the federal government. The company has also agreed to take over portions of the pulp concessions formerly held by the Abitibi Company.

Mill Acquired by Abitibi in 1928

The mill in question is one of three that were taken over by Abitibi in 1928 when it acquired the Spanish River Pulp and Paper Mills. The mill has a rated capacity fo 100,000 tons of newsprint per annum, but, as is the case with a second Spanish River mill at Sturgeon Falls, with a capacity of about 46,000 tons per annum, has been shut down for more than 12 years. The official statement of Abitibi some years ago declared that both mills were "in an impaired physical condition." The problem has existed for Abitibi management as to whether they be repaired and improved for future operation, or whether they could be converted to some other use. Engineers were engaged in 1937 to make a report and their recommendation was that no future consideration be given to the rehabilitation of the mills as newsprint producers by Abitibi. The opinion was expressed that money could be put to better use at other mills of the company.

Under their agreement with the department of lands and forests the new company will use all species of pulpwood, but chiefly jack pine, of which there are large stands in the province. Up to the present very small quantities of jack pine have been used for pulpwood purposes in this province. The department of lands and forests has made available to the company sufficient areas of pulpwood stands so that under proper forest management the company will be supplied with raw material in perpetuity.

When questioned concerning the sale of the Abitibi property at Espanola, Hon. Mr. Hipel said, "All I can say is that it was a large one and it was a cash transaction. The price will be announced when the agreement is placed before the house for ratification."

The formal announcement of the sale is as follows:

"Hon. N. O. Hipel, minister of lands and forests, and Mr. G. T. Clarkson, receiver and manager of Abitibi Power and Paper Company, Ltd., announce that after 11 months of continued negotiations a tri-party agreement was arrived at between the department of lands and forests and the Abitibi Power and Paper Company, Ltd., and the Kalamazoo Vegetable Parchment Company of Kalamazoo, Mich., whereby the Kalamazoo Company have purchased the Abitibi Company's property known as the Espanola plant, which was formerly a newsprint plant, together with other buildings.

"This plant has been closed down for over 12 years. . . . The expansion of the present plant will mean an expenditure of several million dollars. . . . The Kalamazoo Vegetable Parchment Company prior to the war, had been purchasing the larger part of its pulp from the Scandinavian countries. This new development will be a great boost to the town of Espanola and district, as most of the citizens were forced on relief for many years, due to the closing down of the old plant.

"The department of lands and forests will be receiving annually approximately $50,000 additional revenue in the way of timber dues, etc. This new project will give employment to a large number of men during the post-war period."

Notable Growth of the Kalamazoo Co.

Kalamazoo Vegetable Parchment Company is regarded as one of the most progressive concerns of its kind in the world. It operates a mill at the model community of Parchment, in Kalamazoo, Mich. The village is commission-governed and has grown up with the mill. Nearly 1,500 employees, including most of the executives, live at Parchment, which has a 40-acre recreational area known as Kindleberger Park, a union church and community house, a school and a summer program of young people's work which has attracted wide attention.

The mill was founded in 1909 by Jacob Kindleberger, now chairman of the board, and it now covers more than a square mile of land. Raw stock for making parchment was first bought from paper mills, but in 1914 a paper mill was erected.

Papers made at the Kalamazoo mill are used widely for wrapping butter, meats, bread, fish, candy and many other foods. Writing and printing papers for school and business are also manufactured. Three of the machines in the mill, according to Kalamazoo advices, are considered the fastest in the world for high quality papers, turning out a sheet of paper more than 12 feet wide at the rate of one mile every seven minutes.

Henry R. Gould Dead

Henry R. Gould, an executive of the Gould Paper Company, died of a heart attack on January 3 at Lyons Falls, N. Y., two months after his discharge from the Army for physical disability. His age was 26. He was graduated from Hamilton College, where he played football and hockey.

OPA Equalizes Freight Costs on Wood Pulp

Amendment No. 5 to Maximum Price Regulation 114, Effective January 12, 1943, Seeks to Adjust Canadian Transportation Costs on Pulp to More Equitable Basis—Air-Dry Allowances Are Listed.

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., Jan. 13, 1943—OPA has extended to Canadian wood pulp producers basic transportation allowances comparable to those applying to United States producers in order to equalize an added freight burden between consumer and producer on shipments of wood pulp from Canada to the United States.

This action, carried out in Amendment No. 5 to Maximum Price Regulation No. 114 (Wood Pulp), effective January 12, 1943 enables producers to pass on to buyers freight costs in excess of the specified allowances.

In the majority of cases the new provision will result in no increase of costs to wood pulp consumers in the United States for in most cases the actual freight costs will not exceed the allowances to be absorbed by producers in Canada.

In the few cases where increases will occur it is believed that the total costs of the Canadian wood pulp to the United States consumers will be comparable to the costs of shipments from the west coast of the United States that have been displaced now by WPB orders.

Basic transportation allowances will permit the Canadian shippers to continue shipments to their United States consumers regardless of the greater distances to which the pulp must be shipped because of allocation by WPB, resulting in increased freight charges.

OPA Now Regulates Transportation Costs

Maximum Price Regulation No. 114, which became effective April 20, 1942, provides that consumers of wood pulp in this country may not pay prices higher than set forth therein. Thus, through consumer control, prices on wood pulp imported into the United States from Canada are regulated by OPA. The new amendment extends the same regulation to the allocation of freight costs.

At the time Maximum Price Regulation No. 114 was prepared, data as to the distribution and cost of delivery for Canadian pulp was unavailable to OPA, and the regulation required Canadian producers to assume all costs of delivery to United States consumers, as contrasted with U. S. shippers who have been allowed to pass on part of the freight charges to the buyers when such charges went above the basic transportation allowances granted.

OPA has decided to extend the basic transportation allowance now that the situation confronting the Canadian producer has become more difficult because of longer distance shipments from Canada, resulting from WPB's action in removing from the market all tonnages of paper pulp formerly produced in the Puget Sound area of the United States. In November, 1942, this curtailment program made unavailable to eastern consumers more than 40% of their market supply of wood pulp for paper manufacturers.

Allowances Issued by OPA

Identical basic transportation allowances are provided for all Canadian producers of wood pulp to the United States except those producers on the west coast of the Dominion. These allowances are per air dry ton of pulp: Over 80% air dry, $9.50; between 50 and 80% air dry, $12.50; less than 50% air dry, $14.50.

On shipments from the Canadian west coast to points outside the west coast area in the United States the limits on freight which producers will now pay, passing on the balance to the buyers, are, per air dry ton of pulp: Over 80% air dry, $13.50; between 50 and 80% air dry, $15.50; less than 50% air dry, $16.50.

When shipments are made from the Canadian west coast to consumers within the United States west coast area, the allowances are the same as those provided U. S. producers within the west coast area, namely, per air dry ton of pulp: Over 80% air dry, $7.50; between 50 and 80% air dry, $9.50; less than 50% air dry, $10.50.

Shipments originating in Newfoundland, which are small in volume, are not covered in the amendment since experience has not yet shown the need for inclusion of such pulps under the freight allowance system.

Demonstrates Conservation of Manpower

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., January 11, 1943—Solution of the war production and labor supply problems through conservation of existing manpower has been demonstrated with success by the Lakeview mill of Kimberly-Clark Corporation, Neenah, Wis. A 3-month drive ending December 31 materially reduced the number of absences because of accidents or sickness.

Personnel of the mill was divided into twenty-one units with a chairman in charge of each, who presented the program to his group. The object was to achieve considerable improvement in the last three months over the record of the previous nine months, by a method of rating.

Five units rated 100% improvement by having 100% non-absence records. Others also improved their past records. Taken by departments, the materials division improved 74%, the paper mill 67%, engineering 60%, offices and technical department 55%, crepe wadding manufacturing 53%, and crepe wadding converting 29%.

The drive included elimination of on duty and off duty accidents, each rated as two-fifths of the total record, and sickness, rated as one-fifth. While the safety department of the mill has no jurisdiction over employees outside of working hours, the drive impressed upon the workers that accident prevention and health precautions were as important at home as at work, thus making them safety conscious at all times.

ONE OF A SERIES OF SUGGESTIONS TO AID PRODUCTION

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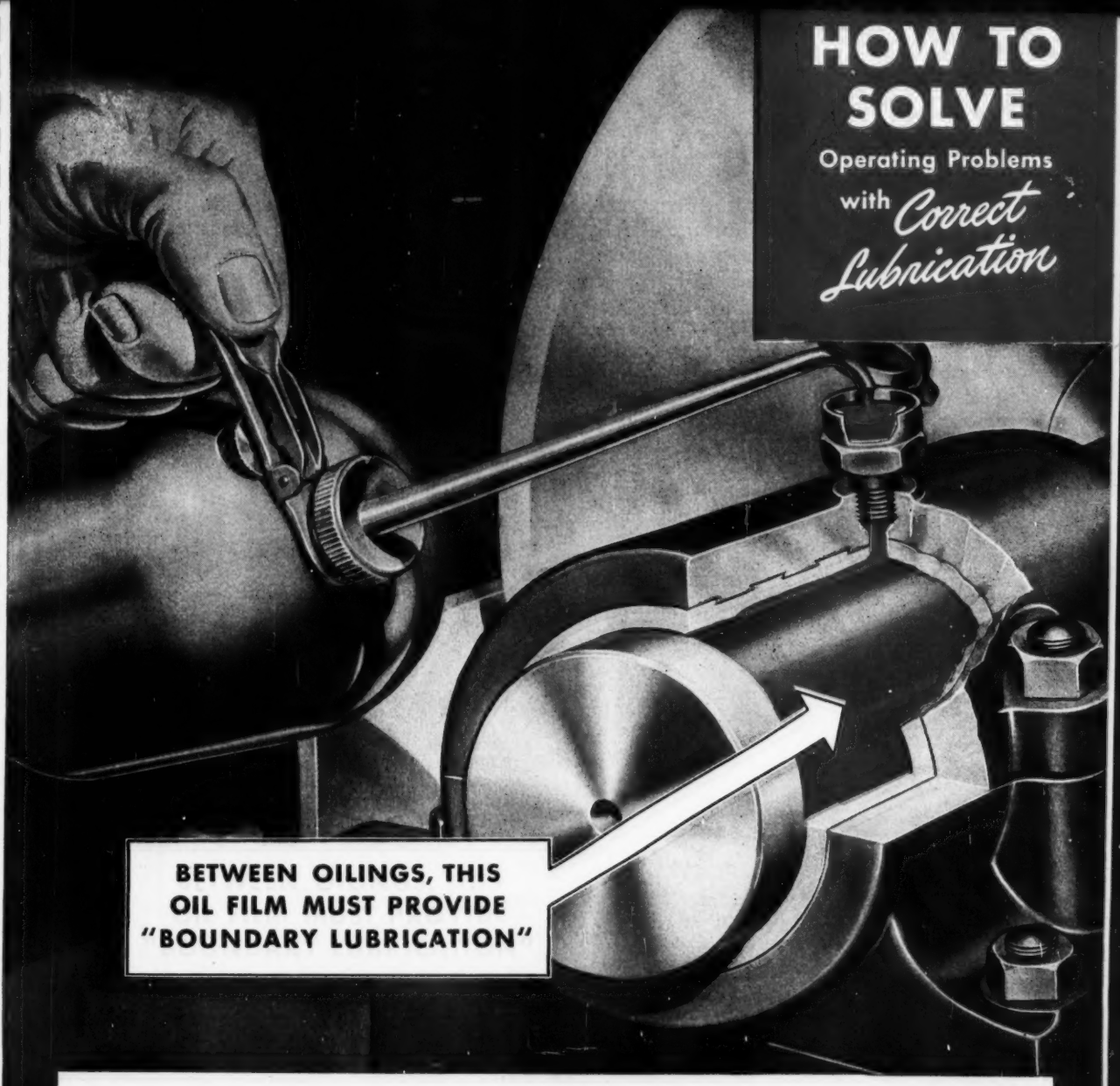

HOW TO SOLVE
Operating Problems with Correct Lubrication
BETWEEN OILINGS, THIS OIL FILM MUST PROVIDE "BOUNDARY LUBRICATION"

Save Production Time Here!

PROBLEM: That red film of oil you see on the journal above is ample—at the time the bearing is oiled. But before the next application, the oil will drain off. Just a tissue-thin film — boundary lubrication — will remain. If you use ordinary mineral oil the film may not stand up. Metal-to-metal contacts between journal and bearing may result. Bearings fail. Important machines stop producing.

ANSWER: There is an oil specially made to meet this problem. It is called Gargoyle Vactra Oil. It has an extremely tenacious, persistent film that resists wiping action and rupture even when a film of microscopic thickness remains. Wear, temperature rise and power consumption are minimized with an extremely small supply of this oil. You are assured dependable operation and economy, too.

GARGOYLE Lubricants

SOCONY-VACUUM OIL COMPANY, INC.—Standard Oil of N. Y. Div. • White Star Div. • Lubrite Div. • Chicago Div. White Eagle Div. • Wadhams Div. • Southeastern Div. (Baltimore) • Magnolia Petroleum Co. • General Petroleum Corp.

CALL IN SOCONY-VACUUM

Trend in Paper Demand Continues Upward

Chicago Reports Stronger Market Has Been Created By Talk of Impending Shortage — All Classes of Paper and Many Specialties in Heavy Demand—Salesmen Plan For Paper Week—Other News.

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., January 11, 1943—The local paper market had a "big week" during the past six days. Demand was reported very strong and growing stronger as further pulp shortage was reported and as the government asked for nearly three million more fiber boxes per month for the armed forces. Against this demand is the curtailment in production in the mills themselves where restrictions plus manpower shortages have resulted in the five day week with promise of a four day week to come. As a result, some local offices report backlogs of orders extended to from two to three months and with deliveries, in many cases, promised not before next May.

Substantial Tonnage Reported

There is still a substantial tonnage reported by the various groups representing mills outside of this area. But this quantity is shrinking rapidly, buyers know it, and the real bull market is on with the exception of one factor—prices. All prices are bouncing along at ceilings.

Rationed Advertising

The newspapers of the State spent part of the week collectively discussing newsprint curtailment and "rationed advertising" coming from the new quota basis to be set. Newsprint markets were strong and groundwoods also in heavy demand. Krafts were moving exceptionally while the sulphite market was equally brisk. Books and covers were under real buying pressure with prices all at the top point. Specialties were in a similar position while the board market, facing the new curtailment order, was looking into increased manufacture of boxes from waste materials. This gave the waste market additional strength as a confused market looked to the February New York meetings to chart the course for the "duration."

Fiber Box Makers Discuss Curtailment Order

In a current analysis in the Chicago *Daily News*, H. G. Seely, financial editor, points out that spokesmen for the paper box industry in Chicago believe that the new production tonnage will result in a cheapening of boxes now in use rather than their elimination. The restrictions, placed on materials used in packaging food, clothing and other items sold in retail stores, are expected to develop a lighter weight board wherever possible, made chiefly of reused and waste materials.

Accepted as Sound Procedure

Chicago box executives are not inclined to quarrel too much with the order, feeling that the purpose of economizing on civilian use of boxes made of new paper pulp without hampering too seriously the output made from waste materials, is sound procedure. The order was also taken to mean that the WPB recognized that there is no great drain on critical materials in the manufacture of boxboard from waste paper. They believe that the present order reflects this spirit.

As far as retail merchants are concerned, they are expected to go right along with the change, having already geared themselves to wartime operation and preached conservation and economies to their customers.

Salesmen Discuss Industry Meeting

The western division of the Salesmen's Association of the Paper Industry held its regular meeting on January 4, taking the entire discussion period for a review of the present situation. It was reported that order backlogs were growing daily as compared to five day weeks with four day weeks in the offing. Also that demand continued very heavy as news concerning further curtailment of paper production secured prominent position in the newspapers and trade publications. The Salesmen's Association also discussed the approaching annual meeting of the industry to be held at the Waldorf-Astoria in New York on February 15, 16, 17 and 18. It was understood that the meeting would be held—as the paper and pulp situation is considered "critical" by government heads—and the Chicago delegation laid plans to be on hand in good numbers for this most important of all industry conferences.

Shipping Rule Reflects Pulp Shortages

Local shippers as well as paper executives believe that the recent extension until August 15 of Rule 41 I.C.C. governing fiber container tensile strength specifications was brought about through fear of another pulp shortage by WPB. The news that the armed forces would need another 2,500,000 fiber boxes a month and that civilian use must be sharply curtailed, was taken as the background for the program of postponement, wherein dropping of the Rule would increase the weight in 42 pound boxes and require substantially more pulp. The extension marks the second time within a year that the railroads have cooperated with the WPB in the face of a possible paper shortage. Rule 41, in its "relaxed" form, presents a compromise between government agencies who have asked that the rule be abandoned for the duration to save paper board. The required public hearing on the matter was held in Chicago on December 1 and objections and suggestions recorded by the consolidated classification committee.

R. C. Swan to Speak Here

The paper group of the Purchasing Agents Association will hold a meeting at the Hotel Sherman on next Wednesday, January 13. Speaker will be Reuben C. Swan, western sales manager for the Champion Paper Fiber Company, who will discuss current problems of raw material supplies, production and distribution difficulties.

Census of Pulp Mills and of Paper and Paperboard Mills for 1941

The accompanying tables show statistics on wood pulp, paper and paperboard for the year 1941. These data, which were collected and compiled by the Division of Current Manufacturers Reports of the Bureau of the Census for the War Production Board, are similar in scope to those published on pulp and paper by the Bureau of the Census for 1940,[1] but are presented in less detail than in the 1939 Census of Manufacturers.[2] The tables given here continue the series previously published for wood pulp production, classified by type, and for paper production, classified by type and by states. Two new tables of data not heretofore covered by the Census are included. These relate to wood pulp consumption, and consumption of fibrous materials other than wood pulp. Except for the new data, the statistics are on approximately the same basis as those published for earlier years by the Bureau of the Census. Comparability of the 1941 data with statistics for earlier years, however, is affected to some extent by the inclusion of statistics for a few companies not heretofore covered, and by certain classification changes in the paper production data.

The data on wood pulp production shown in Table 1 cover all known producers, and are for 207 mills in 1941 and for 205 mills for "new basis" 1940. The increase in 1941 was the result of two new plants coming into operation. Statistics for earlier years published by the Bureau of the Census cover only 199 mills. In order to provide over-lapping data, statistics for the 199 mills are given for the year 1940 under the heading "comparable with previous years." The six mills which were added manufacture products not previously classified as wood pulp. The extent to which the totals for various classes of wood pulp are affected is apparent from an examination of the two sets of figures given for 1940.

The 1941 survey of paper and paperboard production covered 660 mills, while the 1940 statistics are

[1] Census of Forest Products: 1940.
[2] Sixteenth Census of the United States, 1940. Manufactures, 1939. Paper and Allied Products.

TABLE I.—WOODPULP PRODUCTION CLASSIFIED BY PROCESS: 1941 AND 1940
[Tons of 2,000 pounds]

Process	1941	1940	
		New basis [1]	Comparable with previous years [2]
All processes	10,200,726	8,959,559	8,851,740
Mechanical, total	1,925,284	1,808,256	1,762,821
Sulphite fiber, total	2,918,780	2,607,789	2,591,684
Unbleached	1,215,649	995,700	990,668
Bleached	1,703,131	1,612,089	1,601,016
Sulphate fiber, total	4,394,338	3,747,992	3,725,135
Unbleached	3,708,306	3,163,378	3,166,263
Semi-bleached	163,915	131,332	(3)
Bleached	522,117	453,282	558,872
Soda fiber, bleached and unbleached	617,012	532,387	548,047
Semi-chemical, off-quality, screenings, and miscellaneous	345,312	263,135	224,053

[1] See Introduction, p. 1.
[2] Source: Department of Commerce, Bureau of the Census—Census of Forest Products: 1940.
[3] Combined with "bleached."

TABLE II.—PAPER AND PAPERBOARD PRODUCTION CLASSIFIED BY TYPE: 1941 AND 1940
[Tons of 2,000 pounds]

Type of paper and paperboard	1941		1940 [1]
	New basis [2]	Classification comparable with 1940	
All types	17,304,143	17,304,143	14,483,709
Newsprint, total	1,045,269	1,040,826	1,056,304
Newsprint, total	1,045,269	1,040,826	1,056,304
Standard, in rolls	989,530	989,530	1,028,840
Standard, in sheets, and other special grades	55,739	51,296	27,464
Ground-wood printing and specialty papers, total	641,409	632,374	550,453
Hanging	132,338	132,338	142,278
Catalog	69,597	69,597	96,416
Novel-news and news-tablet	36,820	36,820	26,279
Poster and lining	46,632	46,376	28,570
Rotogravure	136,510	136,510	148,396
Other ground-wood papers [3]	219,512	210,533	108,514
Book paper, total	2,026,291	2,015,693	1,655,423
Machine-finished, sized, and supercalendered:			
Free from ground wood	917,561	907,031	898,119
Containing ground wood	272,301	250,757	218,279
Converting paper:			
Body stock for coated paper:			
Free from ground wood	360,793	346,140	227,725
Containing ground wood	22,673	22,668	7,897
Other converting paper	259,702	214,555	137,047
Lithograph	68,220	65,166	32,644
Offset	118,568	118,568	72,842
Other book paper	6,473	90,808	60,870
Cover paper	36,286	35,145	26,944
Text paper	25,284	25,284	11,065
Writing paper (fine), total	737,827	720,210	599,452
One-hundred per cent rag	13,094	12,236	12,143
50 per cent to 100 per cent rag	43,089	43,089	33,816
Less than 50 per cent rag	52,982	50,789	47,455
Sulphite bond	440,894	440,894	364,288
Other chemical wood-pulp writing paper	187,768	173,202	141,750
Wrapping paper, total	2,745,815	2,717,285	2,500,818
Unbleached sulphite and semi-bleached sulphate:			
Butchers' and grocers' paper	145,970	144,295	138,252
Bag	18,631	18,631	11,772
Machine-glazed wrapping	17,494	17,494	16,896
Other grades	90,769	82,480	42,856
Bleached sulphite and bleached sulphate:			
Waxing paper (18 lbs. and over)	173,687	173,468	149,379
Bag	43,608	43,608	49,322
Other grades [4]	166,325	154,969	168,540
Wrapping and envelope manila	34,616	31,768	25,042
Greaseproof	25,888	25,121	21,653
Glassine	70,437	70,418	53,826
Kraft wrapping:			
Machine-finished:			
Wrapping	428,446	428,127	475,479
Converting:			
Bag	867,668	867,668	717,163
Other	259,752	251,458	296,507
Machine-glazed:			
Wrapping	46,414	46,414	50,584
Converting (bag and other)	69,215	65,833	43,963
Bogus and screenings	32,639	32,639	26,961
Heavy (mill wrappers, etc.)	56,046	55,957	46,155
Rope and jute	22,218	17,805	17,307
Tagboard, light manila board, and pattern	150,916	149,958	43,303
Other wrapping paper [5]	25,076	39,174	105,860
Tissue paper, total	960,309	886,566	761,713
High-grade tissue (cigarette, condenser, carbon, etc.)	49,816	49,356	27,818
Waxing (up to 18 lbs.)	40,353	40,353	35,865
Wrapping tissue (up to 18 lbs.)	66,865	66,006	67,970
Toweling	192,928	187,299	155,754
Toilet tissue	331,431	331,431	316,386
Napkin stock	124,253	42,287	73,191
Pattern tissue	3,528	3,528	3,494
Sales-book tissue	1,376	1,217	815
Carpet twisting	13,682	13,682	12,100
Other tissue	136,077	151,407	68,319
Absorbent paper, total	89,108	166,914	129,410
Blotting	14,683	12,256	9,993
Filter	3,769	3,769	2,625
For vulcanized fiber	25,469	18,906	18,493
For parchmentizing	27,956	27,996	24,654
Other absorbent paper [6]	17,191	103,987	73,645

TABLE II—(Continued)

Type of paper and paperboard	1941 New basis [1]	1941 Classification comparable with 1940	1940 [2]
Building paper, total	721,312	713,858	682,460
Sheathing paper	40,338	33,926	43,629
Felts	577,812	568,449	589,165
Asbestos-filled and asbestos paper	97,883	93,084	44,655
Other building paper	5,279	18,399	5,011
Paper not elsewhere classified	28,657	100,215	60,120
Boards, total	8,246,576	8,249,773	6,449,548
Container boards:			
Liners:			
Kraft	1,982,224	1,664,611	1,461,399
Jute	962,804	962,759	788,800
Other	94,113	94,112	51,635
Chip (plain and test)	543,699	525,061	441,428
Straw (for corrugated-container use)	439,613	439,613	437,782
Other container boards	191,275	331,021	253,790
Folding boxboards (bending):			
Manila-lined (all lined boards)	876,843	819,058	698,168
Patent-coated	408,756	405,636	387,894
Other folding boxboards	512,136	499,227	330,390
Set-up boxboards (nonbending):			
Chip and straw	500,259	436,791	385,142
Newsboard	382,904	360,259	299,037
Other set-up boxboards (incl. tube, egg-case, etc.)	304,604	262,540	214,370
Binder's board	46,667	46,667	25,606
Cardboard:			
Blanks and miscellaneous	25,068	25,068	25,138
Clay-coated cardboard	44,847	44,846	23,450
Photomounts and other cardboard	10,145	21,052	5,195
Bristol board:			
Index	52,942	51,406	31,070
Mill (including specialties)	39,231	39,231	32,830
Uncoated postcard	8,021	8,021	6,574
Leatherboard	18,911	18,243	15,706
Pressboard	19,295	19,173	9,443
Building boards:			
Wallboard	243,567	243,568	42,748
Insulating	296,777	295,434	112,004
Other building boards	39,330	36,702	24,691
Boards not elsewhere classified	202,545	599,674	345,258

[1] See Introduction, p. 2.
[2] Source: Department of Commerce, Bureau of the Census, Census of Forest Products: 1940.
[3] Includes data for "Printing" paper, which cannot be shown separately without disclosing figures for individual establishments.
[4] Includes data for "Machine-glazed wrapping" paper which cannot be shown separately without disclosing figures for individual establishments.
[5] Includes data for "Vegetable and other imitation parchment" which cannot be shown separately without disclosing figures for individual establishments.
[6] Includes data for "Matrix paper and board" which cannot be shown separately without disclosing figures for individual establishments.

for 649 mills. Despite this considerable variation in plants reporting, the data are practically complete in both years, so far as can be determined. A total of 621 mills reported in both years, 39 mills reported in 1941 only and 28 mills reported in 1940 only. Of the 39 mills included in 1941 but not in 1940, 11 were idle in 1940 and hence not counted, 18 were new in 1941, and 10 were not previously classified as paper and paperboard producers. Of the 28 mills reporting in 1940 only, 24 were either idle or out of business by 1941, two were classified as belonging in other industries, and two were not canvassed.

Comparability of the statistics for 1940 and 1941 is significantly affected only by the reclassification of the 10 mills mentioned above. The classification most seriously affected is "building board." Thus, five mills, not classified as building board producers in 1940, produced 210,000 tons of building board in 1941, or about 36 percent of the total reported for the building board class. (See Table 2.) The remaining classification changes affect the totals for individual types of paper to only a minor extent. Paper production classified by states is also affected by these reclassifications (Table 3). Thus, in 1941, more than 11 percent of the total production in Mississippi was accounted for by mills not previously classified as paper and paperboard producers. In Minnesota 7 percent of 1941 output was accounted for by such mills, in Iowa and New Jersey about 3 percent, and all other states, 1 percent or less.

The paper and paperboard production data in Table 2 are also affected by certain changes in type classifications. For the most part, such changes in classification resulted from a re-examination of the "other paper" classes shown under the major headings, and the allocation of paper previously reported as "other" to specific classes. In order to provide comparable

TABLE III.—PAPER AND PAPERBOARD PRODUCTION CLASSIFIED BY STATES: 1941 AND 1940

[Tons of 2,000 pounds]

State	1941	1940 [1]
United States	17,304,143	14,483,709
California	381,985	329,081
Connecticut	222,156	174,496
Delaware	49,222	29,777
Florida	480,296	392,003
Illinois	693,610	610,769
Indiana	297,606	252,435
Louisiana	809,287	753,752
Maine	1,178,657	1,073,039
Maryland	169,863	161,709
Massachusetts	734,559	518,764
Michigan	1,468,775	1,239,381
Minnesota	468,301	300,563
New Hampshire	208,943	169,059
New Jersey	939,378	780,151
New York	1,770,504	1,455,573
North Carolina	225,997	154,232
Ohio	1,206,478	997,867
Oregon	334,645	310,870
Pennsylvania	1,055,313	987,650
Texas	132,295	71,037
Vermont	94,462	77,046
Virginia	708,412	577,625
Washington	681,017	600,188
West Virginia	59,538	51,825
Wisconsin	1,258,239	1,072,150
Other Southern States [2]	1,336,665	1,035,068
Other States [3]	337,940	307,606

[1] Source: Department of Commerce, Bureau of the Census—Census of Forest Products: 1940.
[2] Includes Alabama, Arkansas, Georgia, Mississippi, and South Carolina, which cannot be shown separately without disclosing figures for individual establishments.
[3] Includes Colorado, District of Columbia, Iowa, Kansas, Missouri, Rhode Island, and Tennessee, which cannot be shown separately without disclosing figures for individual establishments.

TABLE IV.—WOODPULP CONSUMPTION CLASSIFIED BY TYPE OF PULP: 1941 AND 1940

Type of pulp	1941	1940
All types	11,134,440	9,781,739
Mechanical, total	2,276,784	2,096,125
Sulphite fiber, total	3,348,476	2,906,794
Unbleached	1,543,146	1,348,951
Bleached	1,805,330	1,557,843
Sulphate fiber, total	4,476,672	3,964,729
Unbleached	3,710,405	3,292,130
Semi-bleached	207,884	178,405
Bleached	558,383	494,194
Soda fiber, bleached and unbleached	652,622	531,581
Semi-chemical, off-quality, screenings, and miscellaneous	379,886	282,510

TABLE V.—CONSUMPTION OF FIBROUS MATERIALS OTHER THAN VIRGIN WOOD PULP IN PRODUCTION OF PAPER AND PAPERBOARD: 1941 AND 1940 [1]

[Tons of 2,000 pounds]

Type of fibrous material	1941	1940
All types	7,216,607	5,711,069
Waste paper, total	5,936,231	4,667,503
News	1,275,939	1,058,887
Mixed waste paper	2,033,372	1,624,031
Corrugated containers	1,317,474	982,763
All other, total	1,309,446	1,001,819
Boxboard, cuttings	253,171	215,210
Extra manilas	36,205	27,006
Manila envelope	7,329	6,286
Manila tabulating cards	11,229	9,239
Hard white cuttings	28,440	19,175
Hard white shavings	23,188	18,013
Soft white shavings	40,027	34,326
Other shavings	99,078	80,488
Heavy books and magazines	287,663	196,846
Mixed books	11,672	21,313
Overissue magazines	16,873	12,109
Ledgers	103,436	71,643
Old kraft paper	123,162	86,029
Kraft cuttings	98,050	68,675
Other	169,903	135,261
Rags, total	460,943	402,600
New cuttings	77,521	55,317
Old rags	59,710	51,085
Roofing rags	323,712	296,198
Straw	605,586	491,821
Manila fiber	11,049	6,997
Old rope	16,347	13,190
Burlap waste	15,878	15,942
Raw cotton	4,183	3,238
Raw flax	28,308	15,105
Other	138,082	94,674

[1] Includes manufacture of insulating board, building paper, roofing paper, felts, and sheathing paper.

data for 1940 and 1941, the figures for 1941 have been presented on the old classification basis, as well as on the new.

The 1941 canvass of paper and paperboard producers also called for information on wood pulp consumption, and consumption of fibrous materials other than wood pulp, for both 1940 and 1941. These data, which, as mentioned above, have not been collected by the Bureau of the Census heretofore, are shown in Tables 4 and 5. Of the 660 mills, more than 550 reported consumption of wood pulp and over 500 reported consumption of other fibrous materials, in both 1940 and 1941.

Wisconsin Employment Declines

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., January 11, 1943 — November employment in paper and pulp mills and allied industries in Wisconsin took another slight dip during November, according to Wisconsin Industrial Commission reports. There was a decline in the number of workers from 23,300 in October to 23,200 in November, a drop of 0.1%. The total is 4.0% below November a year ago, when there were 24,200 on the payrolls.

The average work week, however, has been stretched to 44.2 hours, with the hourly rate averaging 79.8 cents, and the average pay check $35.29. This brought the November payrolls of $820,000 average per week up 2.6% from the total of $799,000 for October. They are also up 7.2% from the November weekly average of $765,000 in 1941.

Converters and carton plants in the Milwaukee metropolitan area showed an upturn, however, with 19 plants reporting 1,899 on the payrolls for November, a gain of 1.4% over October, 1942. The average work week has also been lengthened to 46.2 hours at an average of 76 cents, or $35.12 per week. Average weekly payrolls of $66,687 were up 6.8% from October.

C. C. Candee Heads Pigments Dept.

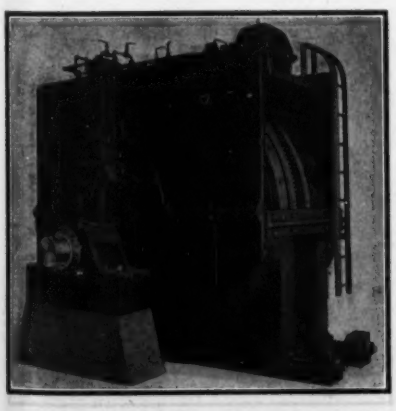
Clifton C. Candee has been appointed technical service director of the Lake and Pigments Department, Calco Chemical Division, American Cyanamid Company. Mr. Candee has been identified with the activities of this department since joining the firm in 1934.

In recent years he has been associated with Dr. Roy A. Shive in the development of synthetic pigments and the establishment of related processes for the dry color trade. Of particular interest is his manufacturing background in the shop, where he served as foreman and superintendent in the Alkali Blue plant at Bound Brook.

A graduate of Iowa State College with a Bachelor of Science Degree in Chemical Engineering, Mr. Candee was president of Alpha Chi Sigma, professional fraternity, and while there was elected to membership in the honorary society, Chi Omega Upsilon. He is a member of the American Chemical Society.

In his new capacity, Mr. Candee succeeds Dr. Shive, who has recently been appointed to supervise production and development of chemicals for synthetic rubber for the Rubber Reserve Company.

Replaces 3 or 4 Pocket Grinders



With a daily capacity of up to 50 tons of groundwood pulp a day, the Roberts Grinder does the work of 3 or 4 pocket grinders. It takes little more space than a single 3 pocket grinder, requires no greater headroom, no auxiliary equipment. The wood is fed to the stone continuously, there is no down-time.

You cannot get new Roberts Grinders today. But if you manufacture groundwood this modern equipment should be right up at the top in your plans for post-war improvements or expansion. It will increase your daily tonnage and reduce manufacturing costs per ton of pulp. There will be impressive savings in power and labor, less waste, improved quality. Yes, the Roberts Grinder is a faster and more profitable way to grind pulp for paper. It is the grinder you will want tomorrow.

ROBERTS Continuous GRINDER

THE APPLETON MACHINE COMPANY
APPLETON WISCONSIN

WPB ISSUES NEW ORDER CONTROLLING PAPER

(Continued from page 7)

exempt from the inventory restrictions are photographic and sensitized paper, cigarette paper and paper that is printed or converted beyond waxing and coating.

Order Controls Printing Paper

Use of paper in commercial printing was brought under control by the issuance of Limitation Order L-241.

During any calendar quarter of 1943 a printer may put paper into production only according to one of the two following schedules:

(1) Not in excess of 22½% of the gross weight of paper used by him during the base period, 1941.

(2) Not in excess of 90% of the paper used by him during the corresponding calendar quarter of the base period.

In neither case is a printer permitted to use paper during the year 1943 in excess of 90% of the entire base period.

Printed matter as defined in the order means any paper with ink applied to it by any of the graphic arts processes. "Put into process" is defined as meaning the first application of ink to paper in the production of printed matter.

Exempted from the order is the printing of newspapers, wall paper, boxes, converted paper products, magazines and books. Use of paper for these products is governed by various other limitation orders and a conservation order. Three of these, concerning converted paper products, boxes and books, are issued simultaneously with L-241, and the others were issued at a prior date.

Also exempted from the order is printed matter produced by or for the account of any department or agency of the United States, or any state, county or municipality in the United States.

The amount of print paper book publishers may use during 1943 was limited by Order L-245.

"The prospective reduction in the quantity of pulpwood and pulp available for the production of book paper makes it necessary to curtail the production of book paper and as a consequence to curtail the use of paper in the production of all kinds of printed matter, including books," the Printing and Publishing Division declared.

Restrictions also are put into effect on paper for reprinting. On and after the effective date of the order publishers who wish to reprint books are required to reduce by 10% the weight of paper used in each copy of the book as last printed prior to January 8.

There are, however, two exceptions to this provision. The first exempts books the last printing of which occurred before the effective date of the order, January 8, when such books were printed on paper of a 40-pound base weight or lighter, and will be reprinted on a paper of equal or lighter base weight.

The second exempts books, the paper for which was ordered prior to January 8, and is scheduled for delivery to, or for the account of, the publisher within 45 days after January 8. These two exceptions, however, do not exempt the publisher from the overall 90% limitations on the use of paper.

All persons affected by the order are required to keep, for not less than two years, accurate and complete records concerning inventories of paper and books, and the production and sales of books.

New Order Affects Converting Plants

The amount of paper that may be used by converters in the manufacture of converted paper products was curtailed through the issuance of Conservation Order M-241-a.

(A converter is defined as any person engaged in the business of manufacturing from pulp, paper, or paper board any of the articles listed in the order.)

The order sets up two lists, A and B, each enumerating a number of paper products. Paper (including pulp and paper board) may be used for List A products in amounts ranging from 50% to 110% of the amount used in 1942. This list includes a variety of articles from envelopes to paper towels.

On and after February 15, however, no converter is allowed to use any paper at all in the manufacture of any of the articles on List B. Typical List B products are albums, coasters and mats, doilies, poker chips, tray covers and mats, and Venetian blinds.

In regard to List A products, the converter has two choices. He may take for any quarter the percentage figure given for the product in which he is interested and apply it to the corresponding quarter of 1942. That is, if the figure given were 90%, he would be allowed to consume up to 90% of the amount he used for the corresponding quarter of 1942. Secondly the converter may instead simply take the entire calendar year of 1942 and use for any given quarter one-fourth of what he is allowed on List A.

Food, wearing apparel, gifts, and other familiar merchandise sold at retail will be packaged in new types of paper board boxes, while some merchandise will not be packaged at all under provisions of Limitation Order L-239.

The amount of paper board that may be used during any quarter of 1943 in the manufacture of boxes used by merchants to package merchandise for retail distribution is restricted to 65% of the tonnage used in such boxes in the corresponding quarter of 1941.

Raymond & McNutt Co. 25 Years Old

Raymond & McNutt Company, paper merchants, 9th and Sansom streets, Philadelphia, Pa., was founded in 1917. In this connection the company has just sent out a handsomely printed and appropriately decorated circular reading as follows:—

"We announce, with pride, the completion of twenty-five years in business.

"To you, on this our anniversary, we extend our thanks—for your friendship that has been reflected through the business that you have given us and without which we could not have reached this milestone.

"As we look back over these years our mind is filled with many pleasant memories of our business contacts with you.

"In the coming years we shall have but one objective; to merit your continued friendship and patronage."

W. I. Galliher to Be Sales Manager

E. T. Asplundh, vice president, Pittsburgh Plate Glass Company, announces, effective January 1, 1943, the appointment of W. I. Galliher as executive sales manager of the Columbia Chemical Division, manufacturers of heavy industrial chemicals, including alkalies, chlorine, calcium chloride, and specialties. Mr. Galliher, formerly director of sales, succeeds Eli Winkler, who is retained in the capacity of Executive Consultant.

The Chemical Division's executive sales offices were transferred from New York to the general offices of the company in Pittsburgh on September 1, 1942, completing the program of coordinating all activities of the company's several divisions at central headquarters. Mr. Galliher will maintain his office in the Grant Building, Pittsburgh, Pa.

D. J. Hardenbrook Gets New Position

Donald J. Hardenbrook, recently appointed post war planning manager of Union Bag and Paper Corporation, has now been made assistant to the president of the company, largest U. S. manufacturer of kraft paper bags and one of the largest producers of kraft paper and board in the country. In making this announcement, Alex Calder, president, said that Mr. Hardenbrook would continue to have full responsibility for post war planning.

The new assistant to the president is a member of the drafting committee of the post war planning committee of the National Association of Manufacturers and of the post war reconstruction committee of the New York Board of Trade.

Sends Gifts to Customers' Sons

Louis Schulman of Louis Schulman & Co., "the complete paper box supply house," 465 Broome street, New York, writes: "Feeling very strongly about this war, and the boys who are fighting in it, I decided, the early part of December, that besides our usual Christmas gifts, that I would send a Christmas gift to the sons of our customers in the camps and in the fields.

"With this in mind I secured the addresses of over 30 boys all sons of our customers and friends and sent them each a box of the finest cigars. I do not know just when they'll get it, but it surely will come as a most pleasant surprise to them.

"I felt that these young boys, most of whom I have personally known, could never in the world think or expect that I, after all only a supply house of their father's business, would think of them, and I, therefore, felt that such a gift coming so completely unexpected, would prove the more welcome."

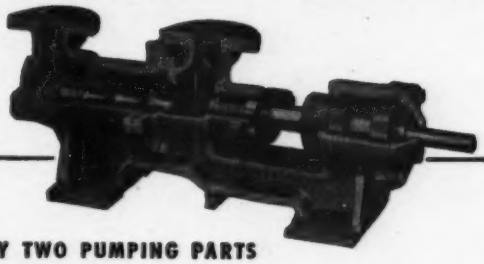
O. W. Trumbull Made Vice-President

O. W. Trumbull, formerly of Asbestos Textile Company, is now connected with Greene, Tweed & Co. of New York, and was appointed vice-president and general manager of that corporation at a meeting of the Board of Directors, Tuesday, November 24, 1942.

Mr. Trumbull brings to Greene, Tweed & Co. many years of experience in the asbestos textile and packing fields, which experience will be most helpful in the continued expansion of this very old company.

"Increasing Production... Improving Quality!"

say R & M MOYNO PUMP users

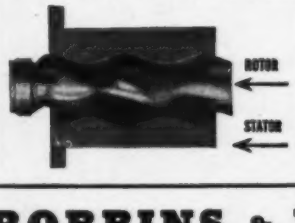


FOR *years* R & M Moyno Pumps have helped leading paper mills *speed production* by eliminating "pumping trouble" delays — at the same time improving product quality, saving money, time and costly maintenance.

You should be *doubly* interested in these performance records *now*—with demand zooming the way it is!

Investigate the R & M Moyno! Put it to work on your *toughest* pumping job. It's radically different—yet so *simple* in principle. Handles size, coating or stock without foaming, turbulence or cavitation—provides uniform, metered delivery over a wide range of liquid viscosities. *Write today* for Folder 1777.

ONLY TWO PUMPING PARTS



Here's the patented secret of the efficient, trouble-free performance of the R & M Moyno Pump. A helical rotor revolves within a helical-threaded stator, providing pumping action like that of a piston moving through a cylinder of infinite length. Construction of the Moyno Pump is so simple that it can be dismantled and reassembled in 30 minutes.

ROBBINS & MYERS • Inc.

MOYNO PUMP DIVISION SPRINGFIELD, OHIO

HOISTS • CRANES • MOTORS • FANS • FOUNDED 1878

CONSTRUCTION NEWS

Under limitations order L-41 all projects involving expenditures of more than $5,000 must be specifically approved by the War Productions Board. The status of projects reported herewith under the provisions of the order is not known.—EDITOR.

Minneapolis, Minn.—The Waldorf Paper Products Company, Box Division, 2236 Myrtle avenue, manufacturer of folding paper boxes and containers, solid fiber boxes, etc., has approved plans for alterations and improvements in plant, and will proceed with work at once. General contract has been awarded to the Dunnigan Construction Company, Oppenheim Building, Minneapolis.

St. Louis, Mo.—The Eliot Wallpaper Mill, Inc., 2605 Cass avenue, manufacturer of wall papers, plans early rebuilding of portion of plant, damaged by fire, January 5, with loss reported close to $35,000, including building, equipment and stock.

Cleveland, Ohio — In connection with the rebuilding of the four-story plant of the Great Lakes Paper Box Company, 7275 Wentworth avenue, Cleveland, recently damaged by fire, as previously noted in these columns, it is said that part of the building when available will be occupied under lease by the Dobeckmun Company, 3301 Monroe street, Cleveland, manufacturer of cellophane bags and containers, sheets, etc., which will expand operations at that location. Plans for reconstruction have been prepared by George S. Rider Company, Terminal Tower Building, Cleveland, architect, which will supervise work, now being placed under way.

Fort Wayne, Ind.—Fire recently destroyed a portion of the four-story plant of the Fort Wayne Corrugated Paper Company, manufacturer of corrugated paper and fiber boxes and containers, with loss reported close to $35,000, including equipment. It is planned to rebuild at early date.

Cleveland, Ohio.—The General Container Corporation, 4600 Brookpark road, manufacturer of corrugated boxes and containers, in cooperation with Socony-Vacuum Oil Company, 26 Broadway, New York, N. Y., is arranging for large increased production of all-paper oil containers to be used by the latter company during the present year. Approximately 500,000 such containers were produced in 1942, to be advanced to a basis of about 12,000,000 in the next twelve months. The paper package resembles the conventional one quart tin can, and is being used for marketing lubricating oils. It was perfected recently following extensive research, and it is now proposed to grant licenses for its manufacture to other paper box producers.

Philadelphia, Pa.—Fire recently damaged a portion of the storage and distributing building of P. Mossman & Co., 852-58 North Franklin street, waste paper stocks. An official estimate of loss has not been announced. It is planned to rebuild at early date.

New York, N. Y.—The Timbertone Decorative Company, Inc., 84 University place, manufacturer of paper products and displays of various kinds, has leased space in building at 13 West Twenty-fourth street, and will occupy for expansion in converting plant.

New Companies

Brooklyn, N. Y.—The Crescent Corrugated Paper Corporation has been chartered with capital of $10,000, to manufacture and deal in corrugated paper products of various kinds. New company is represented by Finkel & Nadler, 401 Broadway, New York, attorneys.

Chicago, Ill.—The Northern Mill and Container Company, 704 North Morgan street, has been incorporated with nominal capital of $5,000, to manufacture and deal in fiber and other boxes and containers. The incorporators include H. R. Graser, L. C. Moore and J. T. Tarczon.

New York, N. Y.—The Non-Soluble Paper Corporation has been organized with capital of 100 shares of stock, no par value, to manufacture and deal in special paper products. New company is represented by Joseph H. Kraus, 30 Rockefeller plaza, New York, attorney.

Eastman Praises Paper Industry

Joseph B. Eastman, director of the Office of Defense Transportation, was generous in his praise of the paper and pulp industry when he spoke at a meeting of the Chicago Association of Commerce held in this city on January 6. While urging greater cooperation of industries with transportation agencies as a means of aiding the war, he singled out the pulp and paper industry for real praise. His reference to the paper industry came after he had told of attempts to get industries to buy supplies at the closest possible points. He said that the industry had found ways and means of saving transportation out of realization of the importance of the task to themselves and to the war effort. He urged important and basic industries to eliminate suspicions of "ulterior purposes" and give wholehearted cooperation. The speaker was introduced by Nathaniel Leverone, state salvage director, who said that "Mr. Eastman was one of the few high officials who know their business and one who stands out like a clearing in a mental wilderness in Washington."

Syracuse Alumni to Meet Paper Week

The annual meeting of the pulp and paper alumni of the New York State College of Forestry of Syracuse will be held in the South Room of the Hotel Commodore, 12:15 P. M., February 16, 1943. This meeting is the annual get-together during the convention of the Technical Association of the Pulp and Paper Industry.

All who plan to attend are urged to advise Richard T. Bingham, Titanium Pigment Corporation, 99 Hudson street, New York, N. Y., immediately.

L. E. Maglathlin Made Sales Manager

William Whiting, president of the Whiting Paper Company, Holyoke, Mass., announces the appointment of Leon E. Maglathlin as sales manager.

Carter Rice Hold Quarterly Meeting

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., January 11, 1943—With the essentiality of the paper industry as the keynote of the session, the first quarterly meeting of the year of Carter Rice & Co., Corporation, was held Saturday morning at the office of the company with all the executives and their staffs present.

Vice-President H. L. Carter made a few remarks. The subject, "As a Salesman Sees It," was covered by George F. McLoughlin, a salesman, in an excellent manner.

The year 1942 was covered in retrospect and an attempt was made to analyze what is in store during 1943. Subjects of discussion covered sales, merchandising, advertising, and service, the last mentioned including office and warehouse operations. It was felt that the war has affected business in many ways.

Those taking part in the discussions were President C. A. Esty, Merchandise Managers R. S. Welsh and E. A. Crowell, Sales Manager F. H. Winter (fine paper), Sales Manager J. R. Halkyard (wrapping paper), and Office Manager P. A. McGreenery.

F. G. Hoar Goes With Stebbins Co.

[FROM OUR REGULAR CORRESPONDENT]

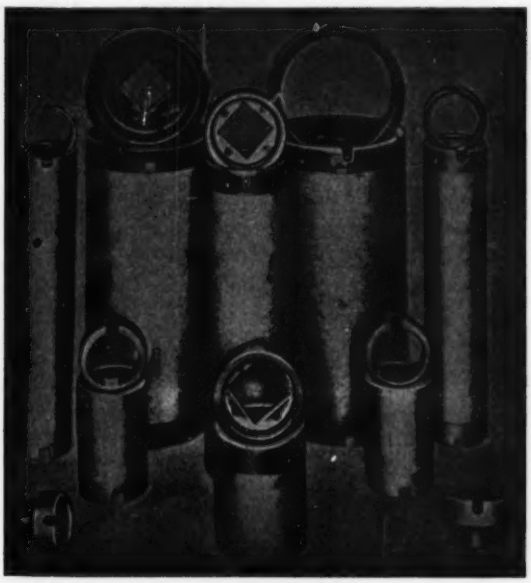
WATERTOWN, N. Y., January 4, 1943—Announcement is made that F. J. Hoar, for several years manager of the Canadian branch of the Stebbins Engineering and Manufacturing Company, has returned to this country to take over the duties as project engineer of the concern. The purpose of the transfer is to supplement the company's war effort, according to an official. The local concern is now conducting a large volume of special lining work for various government agencies and Mr. Hoar will supervise a number of projects pertaining to direct war work. He is a native of Fall River, Mass., and a mechanical engineering graduate of Clarkson College, Potsdam. He has been connected with the local concern for several years and has traveled extensively throughout this country and Canada.

Lieut. White Gets Leave for Duration

Stanley C. White, who came to the Lithographers National Association, Inc., New York, six years ago as cost engineer, enlisted in the United States Naval Reserve and was ordered to report for active duty a few weeks ago, having been commissioned a Lieutenant (Senior Grade) in the United States Naval Reserve. For some time Mr. White had been a member of the United States Coast Guard Auxiliary giving one day a week to Coast Guard patrol work in waters around New York City. This is another "leave of absence" for the duration.

J. H. Newman to be Export Manager

Eli de Vries, president of Parsons & Whittemore, 10 East 40th Street, New York, announces the appointment of J. H. Newman to the position of export manager of the company. Mr. Newman has been in the employ of Parsons & Whittemore since 1940 and his experience in the paper field thoroughly qualifies him for his new position.



ELIXMAN

CAPS

Straight wound paper cores made in sizes from 2" to 10" inside diameter with any thickness wall required.

Long draw protected slot caps of heavy gauge steel in all standard sizes.

Heavy duty caps with reenforced square hole. This patented feature of reenforcement gives added strength and durability.

CORES

Samples of caps or cores will be gladly submitted

ELIXMAN PAPER CORE COMPANY, INC.

CORINTH, N. Y.

FINANCIAL NEWS

New York Stock Exchange

High, Low and Last for Week Ending January 9, 1943

STOCKS

	High	Low	Last
A. P. W.	1½	1¼	1½
Armstrong Cork Co.	31	30¼	30⅜
Celotex Corp.	8⅞	8⅞	8⅞
Celotex Corp., pf.	80	77	80
Certain-Teed Products Corp.	3¼	3	3⅛
Certain-Teed Products Corp., pf.	34½	32½	33¾
Champion Paper & Fibre Co.	18	18	18
Champion Paper & Fibre Co., pf.	100	99¼	100
Congoleum Nairn Co.	18⅜	17½	17⅞
Container Corp. of America	16½	16	16⅜
Continental-Diamond Fibre Co.	7⅝	7⅛	7⅛
Crown-Zellerbach Co.	11⅞	11½	11⅞
Crown-Zellerbach Co., pf.	82¼	81½	81½
Dixie-Vortex Co.	10½	10¼	10¼
Dixie-Vortex Co.—A.	39	39	39
Flintkote Co.	16	15⅜	15⅝
Robert Gair	1⅞	1⅜	1⅜
Robert Gair, pf.	9¾	9⅛	9¼
International Paper Co.	9¼	8⅜	9¼
International Paper Co., pf.	49½	46¾	49¼
Johns-Manville Corp.	72¼	71½	72
Johns-Manville Corp., pf.	126¼	126¼	126¼
Kimberly Clark Corp.	25	25	25
MacAndrews & Forbes	21½	20½	20½
MacAndrews & Forbes, pf.	....	....	....
Masonite Corp.	34	32	32½
Mead Corp.	6½	6	6⅜
Mead Corp., pf.	67¾	67¾	67¾
Paraffine Companies, Inc.	37¼	36½	36½
Paraffine Companies, Inc., pf.	....	....	....
Rayonier, Inc.	12¼	11¼	11½
Rayonier, Inc., pf.	27½	26½	27½
Ruberoid Co.	21¼	20½	21¼
Scott Paper Co.	39	38	38
Scott Paper Co., pf.	114	114	114
Sutherland Paper Co.	26¼	26¼	26¼
Union Bag & Paper Corp.	8½	8	8½
United Paperboard Co.	3¼	3⅛	3⅛
U. S. Gypsum Co.	64	62½	63
U. S. Gypsum Co., pf.	175½	175¼	175½
West Virginia Pulp & Paper Co.	12¾	11¾	12¾
West Virginia Pulp & Paper Co., pf.	103	103	103

BONDS

Abitibi Pulp & Paper Co. 5s '53	48½	48½	48½
Abitibi Pulp & Paper Co. 5s '53	70½	70½	70½
Celotex Corp. 4½s '47	98½	98	98½
Certain-Teed Products Corp. 5½s '48	93¾	92½	93½
Champion Paper & Fibre Co. 4¾s '50	....	....	....
International Paper Co. 6s '55	105¼	104¾	105¼
International Paper Co. 5s '47	103¼	103	103
Mead Corp. 4½s '55	....	....	....
West Virginia Pulp & Paper Co. 3s '54	....	....	....

New York Curb Exchange

High, Low and Last for Week Ending January 9, 1943

STOCKS

	High	Low	Last
American Box Board Co.	4½	4¼	4½
Brown Co., pf.	....	....	....
Great Northern Paper Co.	28¼	27¼	28¼
Hummel-Ross Fibre Corp.	3⅜	3	3⅜
National Container Corp.	9½	9	9
St. Regis Paper Co.	1⅜	1⅜	1⅜
St. Regis Paper Co., pf.	118¼	117	117¾
Taggart Corp.	4	3¾	4

BONDS

American Writing Paper Co. 6s '61	90	89	90

St. Regis Buys Extensive Timber Interests

[FROM OUR REGULAR CORRESPONDENT]

VANCOUVER, B. C., January 9, 1943—St. Regis Paper Company of Tacoma, Wash., recently purchased the extensive timber interests of Ralph M. Round in the holdings of the Lake Logging Company on Vancouver Island. This is the third important timber deal to be negotiated in British Columbia in the past few weeks. The amount of money involved in the transaction has not been announced, but it is said to be approximately $1,000,000.

Under the new setup it is stated that H. W. Hunter, for some time a partner with Mr. Rounds of Kansas City in ownership and operation of British Columbia timber holdings, will continue to hold a minority interest in the company and direct the company's affairs from the Vancouver office.

The St. Regis Paper Company, recently shut down under the curtailment program ordered for the pulp and paper industry in the Pacific Northwest states, has been eager for some time to add to its holdings of pulpwood, and the Rounds forest area in the Lake Cowichan district comprises extensive crown grant hemlock which will be available for export when wartime restrictions on shipment of logs to the United States are relaxed.

The general understanding in the trade is that the Rounds interest in Lake Logging Company, one of the larger logging operations on Vancouver Island, is included in the deal. The company has been operating four sides, high lead and slack line, with 15 miles of railroad.

Lake Logging Company recently completed one of the most modern all-electric sawmills in the province.

The other B. C. timber deals announced earlier in December included sales of Canadian Robert Dollar Company's mill and timber holdings to Northwest Bay Logging Company, a MacMillan enterprise with $1,000,000 capital, and the purchase of Vancouver Island timber by the Danish East Asiatic interests.

Buys Container Co. Capital Stock

Announcement has been made of the purchase by Continental Can Company, Inc., of the entire capital stock of the Container Company of Van Wert, Ohio, under date of December 30, 1942.

The assets and business will be merged with those of Continental Can Company, Inc., and the present business continued at the Van Wert plant. There will be no change in management, personnel, or policies.

The Container Company is engaged in the manufacture of fiber drums and barrels for the packing of chemicals and foodstuffs. The company originally was located at Toledo, Ohio, and moved its plant and operation to Van Wert, Ohio, on April 1, 1928. A line of fiber drums and barrels are manufactured under the trade names of Stapak, Fiberpak, and Leverpak.

The merger has been made to afford an opportunity for improvement in customer service, product research and distribution.

Continental Can Company, Inc., is the second largest manufacturer of metal cans in the country with some 50 plants scattered through the United States, Canada, and Cuba.

Nekoosa-Edwards Nets $5.14

The Nekoosa-Edwards Paper Company for the nine months to September 30, reports net profit, after $1,294,676 income taxes, was $323,669, or $5.14 each on 63,000 shares, against $472,165, or $7.49 a share for 1941 period, when income taxes were $850,425. Net sales for the period totaled $7,671,766, against $7,325,312 for the same period last year.

Paper Inventories Low

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., January 11, 1943 — Demands for most of the popular paper lines continued fair during the last week. The year end found jobbers with low inventories and prospects of replacement are somewhat nebulous.

The recent decision that newsprint and other paper going into the publishing field would be cut, did not come wholly as a surprise here. Some such action had been expected. In the newsprint field this may not cause much disturbance for it is expected that advertising lineage will sink this year and papers are making adequate preparations for this. However, it is a blow and one that the trade certainly would like to have averted.

Box factories and container makers are finding the going a little easier, for most of them in Indiana are devoting a large part of their output to defense purposes and it is not felt there will be any lack of raw stock for this purpose. In fact the desire to supply raw material for this purpose was one of the reasons newsprint was cut.

Demand for roofing and building papers showed little change last week. Jobbers have low, but well balanced stocks and the general impression is that the coming year will see more demand than last, which was one of the poorest since the depression. With a vast amount of defense industry located in Indiana, many sections will be able to receive material for required defense housing.

Tissues moved fairly well last week, but demand for wrapping paper and bags declined. This was due entirely to the Holiday aftermath.

This week demand for wrapping paper and bags is expected to show some improvement.

Demand for waste paper, particularly of the poorer grades, showed some strength last week with prices firm to strong.

Rag demand also was steady and prices were firm.

War-time conditions as they affect the paper business, were discussed at the annual sales conference of the Capital Paper Company here. Ed Hall of Cincinnati, Ohio, representing the Grossett Central Paper Company mills, was guest speaker. C. V. Jewell, sales manager of the local company, presided, and a dinner was held in the Columbia Club in the evening.

Early American Paper Makers

Papermaking has been an American industry for two hundred and fifty-two years. Weaving textiles remained a household occupation until relatively recent times. The major growth of woolen manufacturing dates from the middle of the 19th century. Among the pioneers of this era were the ***Draper Brothers.***

At the time they first began to weave felts for papermakers, they were already expert in their knowledge of wool and the blending of wools for various purposes.

Three generations of papermakers have been using ***Draper Felts.*** You too, can depend upon ***Draper.***

Draper Felts Favor Efficiency

DRAPER BROTHERS COMPANY

Woolen Manufacturers Since 1856 CANTON, MASS.

OUR REPRESENTATIVES *to serve you*

L. H. BREYFOGLE, Kalamazoo, Mich.
W. L. CAMPBELL, Savannah, Ga.
RALPH E. BRIGGS, Canton, Mass.
C. K. BEECHER, Delaware, Ohio
E.R. LELOFF, Vancouver, Wash.

PAPER TRADE JOURNAL

Title Reg. U. S. Pat. Off.

Henry J. Berger

EDITOR

Vol. 116 January 14, 1943 No. 2

COMING EVENTS IN PAPER INDUSTRY

American Paper and Pulp Association, Sixty-sixth Annual Convention and meeting, Waldorf-Astoria Hotel, New York, February 15-19.

Technical Association of the Pulp and Paper Industry, Convention, Commodore Hotel, New York, February 15-18.

National Paper Trade Association of the United States, Convention, Waldorf-Astoria Hotel, New York, February 15-18.

Salesmen's Association of the Paper Industry, Annual Meeting and Luncheon, Waldorf-Astoria Hotel, New York, Tuesday, February 16.

The New York Association Of Dealers In Paper Mills' Supplies, Annual Banquet, Commodore Hotel, New York, Tuesday, February 16.

Paper Club of New York, Annual Dinner and Entertainment, Waldorf-Astoria Hotel, New York, Wednesday, February 17.

Canadian Pulp and Paper Association, Thirteenth Annual Meeting, Mount Royal Hotel, Montreal, Que., Canada, January 27, 28 and 29.

New England Section. Technical Association of the Pulp and Paper Industry—Third Friday of each month at the Roger Smith Hotel, Holyoke, Mass.

Delaware Valley Section. Technical Association of the Pulp and Paper Industry—First Friday of each month at the Engineers Club, Philadelphia, Pa.

Lake States Section. Technical Association of the Pulp and Paper Industry—Second Tuesday of each month at the Conway Hotel, Appleton, Wis.

Kalamazoo Valley Section. Technical Association of the Pulp and Paper Industry—First Thursday of each month at the Park, American Hotel, Kalamazoo, Mich.

CONCENTRATION PLANS

The imperative demands of war are many, to exact difficult adjustments of business enterprises and to enforce individuals to bear hardships. The necessity of preservation appears to be the only justification for the widespread destruction wrought by conflict. And as necessity creates the circumstances, so must the citizens in a belligerent nation find it their high duty to cooperate with the government's plans to meet the great problems which confront us. Concentration of effort to win the war is essential.

It is difficult to shift the scenes of peace to those of war. It is especially difficult for industrial concerns whose products are not directly related to the uses of war, to adjust their productive capacities to further its progress. Many branches of the paper industry, for example, are not included within the essential classification. Paper in many of its forms is essential in war and in civilian life, but many items manufactured from paper are excluded as prime necessities. And only the most essential paper products are included in a war economy program. As a result, many products must be inevitably eliminated, many others simplified and a program of concentration of production will be necessary to place the industry on a strictly war footing. What applies to paper must, of course, also be applied to all other non-essentials.

What changes may be required in the paper industry is not now fully revealed. Plans are being formulated and within six months a production schedule is expected to be completed for the paper industry and every other non-essential industry. Although assurances have been given by some officials of the War Production Board, that the simplification program will be carried our broadly, it is understood to include all possible products for civilian consumption. Pulp is an easily handled material, the processing operations are amenable to change and the only unknown factor in the future is that of labor. Manpower is rapidly assuming larger proportions and is now viewed as the most vital factor.

A labor supply adequate to produce all the war goods required, it has been pointed out, cannot be assured without the diversion of a substantial part of the workers now employed in non-essential occupations. To solve the manpower problem in the war industries, non-essential industries will be called upon to substantially restrict, if not to temporarily suspend operations, for the duration of the war. This concentration of production in the paper industry will doubtless require the closing of some mills. It is not now considered a possibility that the output will be as drastically lowered in this country per capita as has occurred in Great Britain. But the concentration program to be adopted this year will very substantially decrease the over-all output of the paper industry for civilian consumption, and as some in the industry expect, may likely result in an ultimate decrease of 50% from the over-all tonnage produced in 1942.

Although substantial progress has been made through standardization and simplification practices in the industry, present plans to fit the paper industry into the war economy, are much more drastic and will have a much greater effect on the industry as a whole than any changes previously suggested or considered. It would seem highly desirable to maintain general business volume at the highest level practicable to keep a balance between civilian activity and military activity. Thus, a better balance between "guns and butter" must be made. In an industrial country like the United States, its great strength is derived from the contributions of a vast number of comparatively small business enterprises. The large concerns are important but their relative significance in a democracy like ours must assume comparatively small proportions, excepting in a few industries, when evaluated with the large number of the smaller concerns. Unfortunately, it is the small businesses that are experiencing the greatest difficulty to adjust themselves to the war economy, and there does not appear much hope at the present time that only a comparatively few of these "little fellows" can very long survive under the adverse conditions now prevailing.

Some information on the concentration program to be effected this year, is contained in the statements of Joseph L. Weiner, upon his appointment as the director of the Office of Civilian Supply of the War Production Board, last month. "So far as possible," Mr. Weiner said, "the effort will be made to have the transition period as orderly as possible. The pace of the program will be timed to do this and still achieve a continued measure of simplification. We believe this can be done in several industries at a time. Of course, it is hard to determine in consumer goods just where the limits of a single industry end, and, accordingly the desirable thing is to carry on the work on all fronts." He added that the program of merchandise simplification has no direct relation to the Controlled Materials Plan, except for the three critical metals, steel, copper and aluminum. He said that the WPB is continually determining the requirements of industry, and merchandise simplification will play a vital role in determining the quantity of materials which will flow to any industry. "We are in the process of creating an operating mechanism to do this, utilizing to best advantage the materials which are available after the needs of the Army and Navy are met. The underlying principle which is stimulating the WPB in this task is guaranteeing that the people will be able to obtain the essential goods they must have at prices they will be able to pay."

Production Ratio Report*

(Production as per cent of six-day capacity)

COMPARATIVE WEEKLY SUMMARIES

Current Weeks—1942		Corresponding Weeks—1941	
November 28	82.1	November 29	107.7
December 5	84.9	December 6	106.9
December 12	86.7	December 13	106.3
December 19	86.8	December 20	107.3
December 26	Holiday	December 27	79.3
Week	60.0	January 3, '42	102.2
January 2, '43	*73.6*		

COMPARATIVE MONTHLY SUMMARIES

Year	Jan.	Feb.	Mar.	Apr.	May	June	July
1941	85.6	89.7	92.2	96.0	98.7	99.3	94.2
1942	104.5	103.9	102.9	100.4	95.3	87.4	75.8

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1941	101.0	99.7	105.2	106.2	100.4	97.4
1942	80.8	82.9	90.7	86.8	79.2	*90.6*

COMPARATIVE YEARLY SUMMARIES

	1935	1936	1937	1938	1939	1940	1941	1942
Year Average.	69.9	80.4	79.8	71.5	83.4	85.6	97.4	*90.6*

Based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

PAPERBOARD OPERATING RATIOS †

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1937	83	89	89	91	88	80	69	77	72	70	57	47	75
1938	56	63	63	60	60	59	59	60	70	73	67	61	64
1939	65	73	76	74	69	73	68	77	82	91	88	77	77
1940	78	75	74	76	82	85	77	79	78	85	82	77	78
1941	81	88	89	89	91	94	92	98	95	99	98	90	92
1942	102	101	101	95	82	72	68	75	76	81	82	*77*	*84*

Week ending Nov. 28, 1942—77
Week ending Dec. 5, 1942—82
Week ending Dec. 12, 1942—84
Week ending Dec. 19, 1942—85
Week ending Dec. 26, 1942—72
Week ending Jan. 2, 1943—*62*

† Per cents of operation based on "Inch-Hours" reported to the National Paperboard Assn.

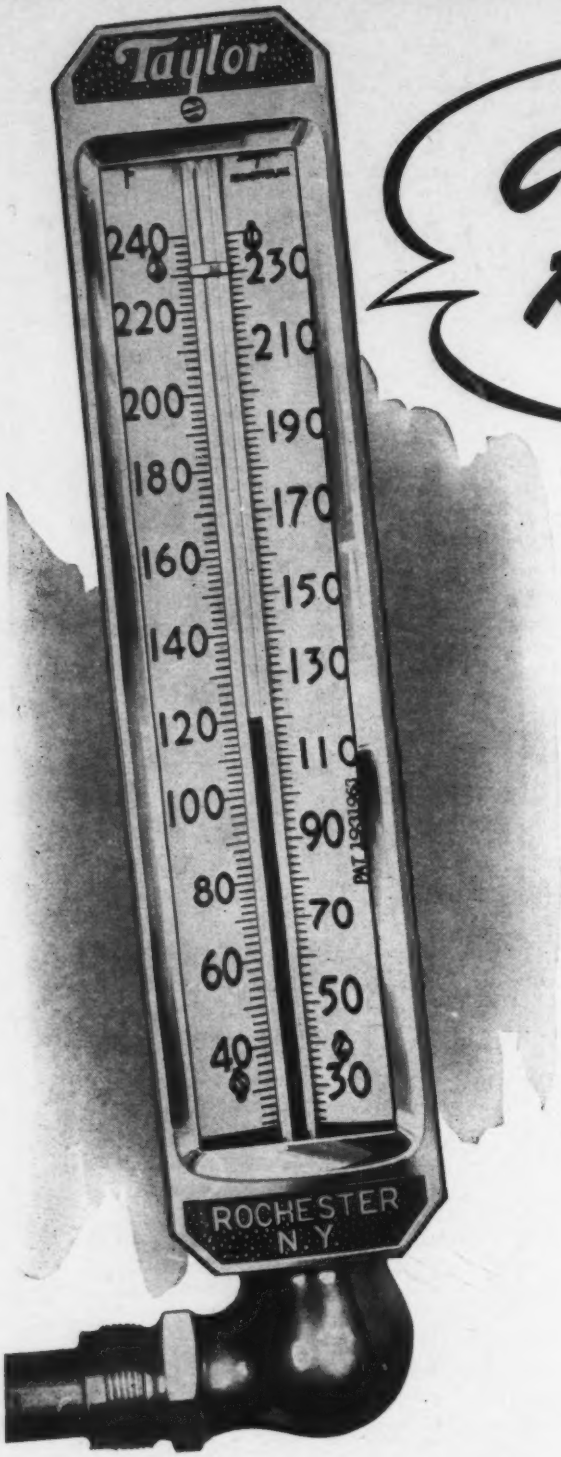
EXPORTERS
OF AMERICAN PULP

TO
BRITAIN
SOUTH AMERICA
AND ALL WORLD MARKETS

LYDDON
& COMPANY
(AMERICA) INC.

51 EAST 42ND STREET
NEW YORK CITY

A THERMOMETER THAT TALKS!



COME AND READ ME!

IT'S the truth! Taylor Industrial Thermometers actually INVITE you to take frequent readings. Why? Because they're *3 times easier to read*—a real advantage in the digest room, the acid plant, and many other less-well-lighted parts of the mill. The reason is, Taylor BINOC tubing. Instead of squinting at it like ordinary tubing, you can read BINOC tubing easily. Here's why—

1. **OPTICALLY CORRECT** *for easy reading.*
2. **WIDE ANGLE OF VISION - HIGH MAGNIFICATION.** *You can see the broad, clear mercury column through more than twice the usual angle.*
3. **THREE LENSES** *gather 3 times the light. Highly magnified mercury column stands out in sharp relief.*
4. **NO CONFUSING BORE REFLECTIONS.** *Empty bore above column never appears to contain mercury.*

Numerals and graduations are exceptionally legible. Taylor Industrial Thermometers with easy-to-read BINOC tubing can be supplied in numerous standard ranges within limits of —40° and +950° F., with a variety of stem constructions to fit any need. Call your Taylor Field Engineer! Taylor Instrument Companies, Rochester, N. Y., and Toronto, Canada. *Instruments for indicating, recording, and controlling temperature, pressure, flow, humidity, and liquid level.*

Taylor Instruments
MEAN
ACCURACY FIRST
IN HOME AND INDUSTRY

★ KEEP ON BUYING U. S. WAR BONDS AND STAMPS ★

Section of the
TECHNICAL ASSOCIATION
OF THE PULP & PAPER INDUSTRY
Edited by R. G. Macdonald, Secretary

TAPPI Paper Testing Committee Report—1942*

By B. W. Scribner[1]

The following additional revisions and new methods have been adopted and published in PAPER TRADE JOURNAL in the issues given and will soon be printed in the standard loose-leaf form:

T 452 sm-41 Brightness of paper. (Dec. 26, 1941).
T 454 m -42 Turpentine test for grease resistance of paper. (April 16, 1942).
T 414 m- 42 Internal tearing resistance of paper (revision). (June 18, 1942).
T 401 m- 42 Fiber composition of paper (revision). (July 9, 1942).
T 435 m- 42 Hydrogen ion concentration of paper extracts. (revision). (July 9, 1942).
T 456 m- 42 Wet tensile breaking strength. (July 30, 1942).
T 457 m- 42 Stretch of paper and paperboard. (Aug. 13, 1942).
T 455 sm-42 Wire and felt sides of paper. (Sept. 10, 1942).
T 458 sm-42 Surface wettability of paper. (Sept. 3, 1942).
T 459 m- 42 Wax test for surface strength of paper. (Oct. 22, 1942).

The method for brightness, which is of particular interest because of its use for control of the brightness limitation orders of the War Production Board for conservation of chlorine, was developed by the Optical Properties Committee.

The method for fiber composition was revised by the Microscopy Committee. The main changes were inclusion of procedures developed by J. H. Graff. Various changes in the method for tearing resistance were made after joint consideration of it by the TAPPI and A.S.T.M. paper committees. After much consideration of the relative merits of hot extraction and cold extraction in making pH (hydrogen ion) determinations, the TAPPI committee finally decided to include both procedures in the revised methods.

The turpentine test for grease resistance was developed after several years of investigation by a TAPPI subcommittee and a subsequent study of it by a committee of the Glassine and Greaseproof Manufacturers Association. As the wire and felt sides of papers may differ considerably in their physical properties, the identification of the two sides is often of importance, and it is thought that the various procedures contained in the method will be very helpful for the purpose. In the method for surface wettability, measurement is made of the angle of contact of a drop of water or aqueous vehicle placed on paper. The primary purpose of the method is for measuring the writing and ruling qualities of paper. In the method for wet tensile breaking strength, the instructions given for wetting and handling the test specimens should be of considerable assistance in obtaining reproductible results. The determination of the stretch of paper under tensile stress is of particular value for finding the amount of stretch of creped and pleated papers. The wax test is used principally for testing the resistance of mineral coating to picking off during printing. Standard sticks of wax having graded adhesive values are used.

The method completed last year for testing the adhesiveness of gummed tape is being withheld because of the difficulty of securing the testing apparatus under the present war conditions.

The system established for coordination of TAPPI and A.S.T.M. paper testing methods continues to function very satisfactorily. The latter has adopted nine methods based on TAPPI Standards and has many more of them under consideration. In most instances, only minor changes were required to reach mutual agreement. At the present time, the TAPPI committee has under consideration methods proposed by the A.S.T.M. committee for flammability and air resistance.

Because of the unusual wartime demands on paper and paper products used for packaging, there is increased interest in the testing of them for resistance to fluids. For this reason, a subcommittee is being formed to make a study for improvement of the existing TAPPI methods for water and water vapor resistance, and to develop any additional methods that may be required.

The development work in progress comprises revision of the method for dirt count and the method for qualitative analysis of mineral filling and coating, and development of methods for paraffin absorptivity, castor oil test for printing oil permeation, and erasing qaulity.

There is now a total of 57 TAPPI paper testing methods.

* To be presented at the Annual Meeting of the Technical Association of the Pulp & Paper Industry, Hotel Commodore, New York, N. Y., Feb. 15-18, 1943.

[1] Member TAPPI; Chairman, TAPPI Paper Testing Committee; Chief of Paper Section, U. S. National Bureau of Standards, Washington, D. C.

Microscopy Committee Report - 1942*

By Fred W. Bentzen[1]

The Executive Committee of TAPPI at the Fall Meeting in 1941 gave its approval of a convention for microscopists in the pulp and paper industry to be held at The Institute of Paper Chemistry sometime during the summer of 1942. Although R. G. Macdonald had prepared mail notices of this meeting for all the TAPPI members, our entry into the war made it advisable to postpone such a convention.

A meeting of the Microscopy Committee was held during the Annual Meeting of TAPPI in February, 1942, with a majority of the committee members together with J. d'A. Clark, general chairman of the Testing Division, in attendance.

At this meeting the following tentative program of work to be undertaken by the committee was decided upon:

1. To collect a library of authentic pulp samples, together with as much information as possible regarding method of preparation, type of fiber, etc. This is to be available to members of TAPPI, and located at some convenient place.
2. To determine weight factors for some of the newer pulp fibers, such as gumwood, Asplund fibers, etc., and to recheck the weight factors of bast and vascular-bundle fibers.
3. To study dimensional data and indentification methods of pulped bast, vascular-bundle, and leaf fibers which will replace jute, manila, and sisal as these fibers became more and more unavailable.
4. To prepare monographs on "Fiber dimensions," including methods of determination, tabulation and listing of the results obtained by different authors, and the different opinions and controversies as regards the relation of such data to paper properties; "stains and reagents"; and a condensed booklet on microscopic optics, illumination, and photomicrography.

The Institute of Paper Chemistry has generously consented that Mr. Graff may assemble and classify the proposed library pulp file, do the necessary work connected with weight factor determinations, and also give part of his time to the preparation of any monographs decided upon; the Executive Committee of TAPPI at the Fall Meeting in Boston (1942) voted to provide such funds as may be needed to finance the projects outlined by the committee.

Work has been started on the collection of samples for the determination of the weight factors mentioned above, but the collection of pulp samples for a standard reference file has been held up, because the opinion of some that the present day pulps would not be representative, although others are of the opinion that samples of the present day pulps, with the necessary data related to same, would be valuable references in years to come. Mr. Graff has begun the assembling of bibliographic references (about 200) for a monograph on fiber dimensions, which the committee has decided should be the first of the proposed series.

The Standards Committee has accepted and published the revision of TAPPI Standard T 401 m-39 (*17*), and the Microscopy Committee also has proposed the acceptance of Browning and Graff's method of speck analysis (*53*) as a TAPPI Standard instead of the present T 455 sm-39.

Publications on Microscopy in 1942

Adhesives

An article by Schirmann (*1*) described a number of rubber adhesives, giving their trade names, and different uses; he stated that, in cases which presents special pasting problems, it is worth while to first make an experiment with a rubber adhesive.

Butterworth (*2*) has compiled a survey of the different types of adhesives and has discussed the principles of adhesion, application, terminology, and classification.

Bonding Zone of Paper Coating

A method of sectioning coated papers to permit precise microscopic observations on the coating-to-paper interface is described by Singleterry (*3*).

Books

"Photomicrography" by Allen (*4*), "Pulp and Paper Microscopy" by Graff (*5*) and "Textile Fiber Atlas" by Von Bergen and Krauss (*6*).

Cross Sections of Fibers and Papers

Herzog (*7*) described a method for observing cross sections of fibers without actually cutting them, and Graff and Schlosser (*8*) showed that the methods of making cross section of papers depends upon the purpose of the cross-sectional study.

Documentation

Grant (*9*) has demonstrated that characters on charred documents are rendered more easily apparent by saturating the papers with a gasoline solution of mineral oil.

Dyes and Dyeing

Millson and Royer (*10*) have shown that it is possible, by microscopical examination of cross sections made from materials dyed with various dyes and dyeing procedures, to clarify some of the factors which enter into making union dyeing one of the most difficult of dyeing processes, and Hess and Gramberg (*11*) found that Congo red adsorption on fibers can be used for detecting small variations, for instance, in bleached chemical wood pulp. The authors showed that the adsorption increases on strong beating of the fibers, irrespective of whether they are chemical wood or other cellulosic material, and have even tried to calculate the fiber surface from such adsorption data.

Electron Microscopy

Sears and Kregel (*12*) described the principles of the electron microscope and some of its applications in the pulp and paper industry. A brief description of the theory and construction of the electron microscope, together with electro-microphotographs of different products (some of which are compared with photo-micrographs), is given by Barnes and Burton (*13*).

Wirgin (*14*) described results of x-ray, optical and electron-microscopical investigations which show that cellulose is made up of bundles of elementary fibrils 80 to 100 A. in thickness and 400 A. long and concluded that the concept of the existence of a coherent micellar structure must be discounted; and Kuhn (*15*), by swelling fibers in cuprammonium solution, crushing them between cover glasses, washing and examining them with the electron micro-

* To be presented at the Annual Meeting of the Technical Association of the Pulp and Paper Industry, Hotel Commodore, New York, N. Y., Feb. 15-18, 1943.

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scope, demonstrated that cotton shows a distinct structure of cellulose fibrils arranged longitudinally.

Hess, Kiessig, and Gunderman (*16*) have made x-ray and electron microscopic investigation of the process of beating of cellulose and stated that the lattice order of the fibrils structure of the fibers are kept normal by the water in the beater and that processes taking place inside the fundamental fibrils account for the decrease in viscosity on beating. The changes in the properties of beaten pulp are caused, not only by an increase in the surface, but also by the changes occuring inside the fibrils.

Fiber Analysis

Pulp Fibers. A revision of TAPPI Standard T 401 m-39 has been published (*17*). Two new substitutes have been proposed for Schulze's stain to differentiate between mechanical and chemical wood fibers. One was by Leach (*18*), who uses a solution of Coomassie brilliant blue FF 200, which stains mechanical wood fibers blue-black and chemical wood fibers red-brown; and Armitage (*19*) suggested the use of Chlorazol cutechine GR 150 in place of Cotton brown N, and Chlorazol azurine G 200 instead of Brilliant Congo blue 2 RW.

Armitage (*20*) also referred to the possibility of differentiating mechanical wood fibers and chemical pulps by the use of the Lofton-Merritt stain but stated that it is better to use a mixture of equal volumes of 1% aqueous solutions of Malachite green and Gossypimine, which stains the mechanical pulp fibers a deep blue green and chemical pulp fibers a rose red.

Post and Laudermilk (*21*) proposed à microchemical stain for cellulose fibers consisting of two solutions (*a*) a 2% solution of idoine in potassium iodide diluted with 9 parts by volume of water containing 0.28% glycerin, and (*b*) a saturated aqueous lithium chloride.

Noll (*22*) has supplemented his previous article on standardized dyes for fiber analysis by discussing and listing thirty additional stains, bringing the total to about eighty dyes.

Textiles. A review of microscopic methods for identification of synthetic fibers has been prepared by Koch (*23*), illustrated with photomicrographs. Koch (*24*) also has written a paper in which he discusses in detail the classification of synthetic noncellulosic fibers and methods of chemical and microscopic identification.

Miller, Mack, and Chapman (*25*) has described a number of chemical and stain reactions, together with microscopic methods, for the identification of nylon and Lanital fibers.

Directions for testing with Colotex B, a universal indicator for textile fiber are given (*26*), and color reactions with cotton, silk, wool, rayons, linen, hemp, jute, coconut, nylon, etc., are described. Another universal textile stain, Texchrome, is described by Davis and Rynkiewicz (*27*).

Methods for identification for various types of synthetic fibers, including rayons, have been published (*28*) with photomicrographs of the longitudinal and cross-sectional appearance of a number of these fibers. A tentative method for the determination of phosphorus in casein fibers, which can be applied to the determination of Aralac in mixture with other fibers, was proposed by Atlantic Research Associates, Inc. (*29*); and the basic problems of textile fiber microscopy, such as the identification, quantitative analysis, determination of quality, and identification of damage to the fibers were discussed by Krauss (*30*).

Fiber Dimensions

Daniels (*31*) described a special sampling technique (the cut-squaring method, employing a glass plate), and a method for measuring the length of individual wool fibers; the method takes less time than would be anticipated and which has proved entirely practical.

The fibrograph, an optical instrument employing photovoltaic cells for scanning samples of parallel fibers and simultaneously tracing a length frequency curve, has been described by Hertel (*32*).

Mühlsteph (*33*) has made an intensive study of the measurements of the width of fibers, size of the lumen, and thickness of the cell wall in wood cross sections, as well as intact soda pulp fibers. He (*34*) also stated that measurements of the length and the width of cells found in wood pulp do not suffice to define their form. The thickness of cell walls and the width of the lumen are also important.

Fiber Structure

Preston (*35*) has come to the conclusion that the optical heterogeneity of the walls of untreated swollen jute is not to be explained in terms of a change in the cellulose chain direction. The evidence available shows that the wall is composed of chains forming a single steep spiral.

Hock and Ramsey (*36*) stated that the microscopic examination of a cotton fiber reveals that the fiber is made up of smaller structures upon which the properties of the whole fiber depend.

Wergin (*37*) has observed that the outer walls of the epidermal cells of the seed of *Gossypium barbadense* show a foliar structure. Before these walls grow out into hairs, areas of thickening with pronounced double refraction appear on them which represent apparent reserves of wax-like wall material.

Ritter (*38*) has reviewed the literature on the microstructure of cellulose fibers during the last three years.

Marquette (*39*) presents a polemical discussion in support of the work of Farr and co-workers concerning the physical structure of cotton fiber. Reference is made to recent studies with the electron microscope and images of cellulose materials obtained with it. Farr (*40*) states that native cellulose particles are formed in the colorless plastids of living cotton fibers by a process which is essentially similar to the method of formation of mercerized cellulose particles in the chloroplast of *Halicystis*.

Frey, Wyssling, and Preston (*41*) have found that submicroscopic cellulose strands are oriented parallel (parallel texture) in the cell walls of the plant fibers, but appear to be in dispersion (reticular texture) in the cell walls of other plant cells—such as latex vessels, sieve tubes, and certain parenchyma cells. The orientation of the cellulose strands may be proved in a simple way by staining the cell wall with zinc chloroiodide.

Fluorescence

Radley (*42*) reviewed some of the applications of fluorescence to analysis and lighting and states that fluorescence analysis is not a cure for all evils, but is an extremely valuable addition to known methods of testing and, when used with care, provides information unobtainable by other means.

Henk (*43*) gave data on characteristic fluorescence colors of undyed cellulose and of natural and synthetic textile fibers.

Illumination

An inexpensive and versatile fluorescent microscope lamp giving sufficient light for use with high-power microscopy and low magnification photomicrography is described by Berkelhamer (*44*); Broadfoot and Schwarz (*45*) also recommend fluorescent light for photomicrography of textile materials, stating that it possesses the advantage of even illumination, prevention of heating the sample, control of surface lighting in shade and shadow, short time exposure, and reduction in cost of equipment.

Microscopy of Sugars

Hassid and McCready (*46*), referring to the phenylhydrazine reaction first introduced by Fisher, state that the osazones produced by various sugars are crystalline and possess characteristic crystalline forms when viewed under the microscope.

Particle Size

Richardson (*47*) discussed the optical and sedimentation methods for determining particle size distribution and the application to the study of soil properties, the efficiency of grinding and milling processes, etc.

Allen (*48*) has shown that the difficulties of Green's and of Haslum and Hall's method of particle dispersion is overcome by kneading the dry pigment into a drop of suitable, optical clear cement (Duco household cement) and spreading it out into a thin mount.

Tullsen (*49*) used Raleigh's equation for the scattering power of pigment particles to estimate changes in the color of ink pigments, as it depends on particle size, wavelength of light, and indices of refraction of particle and vehicle.

Polarizing Accessories

West (*50*) has described some accessories which facilitate the conversion of medical and similarly equipped microscopes into polarizing instruments.

Pulp and Paper Impurities

Graff and Nihlen (*51*) have produced a photographic chart of speck sizes from 0.02 to 5.00 sq.mm. (exact size) to be used as described in TAPPI Standard T 213 m and T 437 m.

Becker (*52*) discusses the two general methods of elimination of dirt in pulp—namely, separation of dirt by weight with rifflers, Centrifiners, or Purifiners, and separation by size with screens.

Browning and Graff (*53*) have prepared a chart for speck analysis of the most common specks in pulp and paper. The specks are classified as to their source as raw material dirt (subdivided into specks from wood, rags and materials added to the pulp), process dirt, and mill dirt. Identification of the specks is determined by physical properties, solubility, and chemical tests. Solvents and chemical reagents are given.

Starch

Badenhuizen (*54*) stated that, from a critical study of recent investigations on the microdissection of starch grain, swelling phenomena, and chemical and colloidial properties, the conclusion may be drawn that starch is a chemically homogeneous product, containing various impurities derived from the amyloplast or the manufacturing process which affects its colloid properties.

Surface Area

Smith and Green (*55*) have developed a water-vapor adsorption method for determining the specific surface of particulate substances. No high vacuum equipment is required, as the measurements are made at atmospheric pressure. This method makes possible the determination of the surface-shape factor and the investigation of the particle size of materials too fine-grained to be measured with the microscope.

Clark (*56*) describes a new, rapid, and simple test for measuring the exposed surfaces of pulps, rayon fibers, and similar materials, with a fair degree of accuracy. The test comprises depositing a continuous film of metallic silver (about 0.1 μ thick) on the surfaces of fibers and fibrils by virtue of their reducing properties, and then measuring the unknown area of the exposed silver quantitatively by its ability to catalytically decompose a dilute solution of hydrogen peroxide under standardized conditions, as against the effect of measurable surfaces, such as silvered cellophane.

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Delaware Valley TAPPI on Motive Power

The Delaware Valley Section of the Technical Association of the Pulp and Paper Industry held its regular technical meeting at the Engineers Club, Philadelphia, Pa., on January 8, 1943, Ed. N. Poor, secretary, presiding.

A. M. Cooper of Westinghouse Electric and Manufacturing Company discussed various phases of motive power for paper and paperboard mill equipment and machinery.

Among those present were: Edward J. Albert, D. A. Beiswinger, S. G. Borson, Alan R. Boyd, W. C. Brow, O. C. Cordes, C. M. Connor, Paul Easton, Jacob Edge, K. Ivor Ekholm, E. N. Glauner, Jesse Good, Miss L. V. Hans, Harry Hulmes, V. Jacobsen, George B. Martin, William Marshall, Miss Louise McGrath, Alex McInnes, H. C. Merritt, Lewis B. Miller, E. N. Poor, C. H. Rice, J. Carol Schmidt, J. C. Scholler, Charles A. Schubert, John Shallcross, Edward A. Shallcross, John K. Staats, R. G. Stevens, Richard Temple, I. W. Voller, G. C. Walton and A. E. Waugh.

Pacific TAPPI on Critical Materials

The Pacific Section of the Technical Association of the Pulp and Paper Industry held its regular technical meeting at the Monticello Hotel, Longview, Washington, on January 5, 1943, E. P. Wood, chairman, presiding.

O. T. Defieux, superintendent of Steam Plant, Crown Zellerbach Corporation, Camas, Wash., led a discussion on the subject of "Conservation of Critical Materials in the Pulp and Paper Industry." After outlining the broad general aspects of the problem, Mr. Defieux called on several members for remarks on specific materials.

R. H. Williams, training specialist of the Training Within Industry Division, War Manpower Commission, gave a highly interesting talk on "Where Job Instruction Training Fits Into the Induction Procedure." Mr. Williams' account of what the War Manpower Commission is now doing regarding this important problem was well received.

The program closed with the showing of two films, "Hemlock Harvest" a Technicolor film showing the Crown Zellerbach logging operation at Neah Bay and "Trees for Tomorrow" produced by the American Forest Products Industries, Inc.

The next meeting of Pacific Section will be held at Portland, March 2, 1943.

Among those present were O. C. Abbott, Niles M. Anderson, Charles Bannan, E. R. Barrett, R. B. Beal, Geo. H. Beisse, P. W. Brackett, Norman J. Briggs, A. M. Cadigan, R. F. Calligan, J. G. Carson, Claud Christiansen, W. W. Clarke, J. W. B. Cox, John N. Crosby, R. E. Dana, Harold A. Deery, O. T. Defieux, David M. Dibrell, A. E. Erickson, Ed Escher, Carl Fahlstrom, Bert W. Farnes, Donald G. Felthous, John M. Fulton, G. H. Gallaway, James Gould, C. H. Graham, John F. Hart, W. H. Haverman, S. E. Hazelquist, J. S. Heigel, E. J. Hinde, H. F. Hoehne, O. L. Hudrlik, W. C. Jacoby, W. N. Kelly, John W. Klein, R. J. LeRoux, S. J. Mannus, Wm. C. Marshall, Robert W. Martig, V. S. Mauerman, C. J. McAllister, F. D. McGillicuddy, Jr., C. L. McPhail, Paul F. Miescke, H. Norman Miller, Roy R. Miller, K. M. Milligan, T. E. Moffitt, D. C. Morris, A. G. Natwick, N. H. Norton, E. H. Nunn, James E. Peake, H. T. Peterson, Willis C. Peter, A. S. Quinn, E. D. Rich, E. J. Roake, A. W. Russell, Walter A. Salmonson, Otto H. Sangder, Jack V. Savage, J. W. Schuh, Harlan Scott, W. J. Shelton, Anton Siebers, Larry K. Smith, Roy R. Sullivan, Virgil M. Sutherling, Paul J. Thiess, Lloyd Thorpe, R. M. True, W. G. Van Beckum, H. Vay Wagner, Harold C. Wall, J. W. Wenger, R. S. Wertheimer, J. A. Wilcox, Robert H. Williams, D. D. Wilma, Albert Wilson and Edward P. Wood.

Empire State TAPPI on War Problems

The Empire State Section of the Technical Association of the Pulp and Paper Industry, held technical meetings in Glens Falls and Syracuse, N. Y., on January 7-8, 1943, respectively.

Allen Lowe of Sandy Hill Iron and Brass Works, discussed some of the bottlenecks and their cure in the pulp, paper and paperboard industry.

Richard T. Barnes of the International Nickel Company, addressed the group on modern materials in papermaking machinery. The talks were followed by discussion with W. O. Hisey presiding.

TAPPI Water Committee Report—1942*

By Lewis B. Miller[1]

Analysis of Industrial Process Water

The revision of TAPPI Standard T 620 m has been completed. In the revision of this standard the governing policy has been to include those analytical procedures which are both rapid and accurate, rather than to select those methods which are characterized by highest accuracy. In instituting control methods in a plant which involve water analyses, it is usually more desirable to have a large number of analyses of fair accuracy, which show variations in operating conditions, rather than a few analytical results of highest accuracy. The revised standard has, therefore, been written to include methods which are characterized by seasonable accuracy, rapid procedure, simplicity of procedure and simplicity of equipment required. In some cases the procedures selected represent a compromise of these characteristics.

The work of revision has been in the hands of Miss L. E. McGrath, member of the Water Committee, who has done a splendid job of collecting and evaluating rapid methods of water analysis for this standard.

TAPPI Monograph Series—No. 1

The preparation of the TAPPI Monograph Series —No. 1 (Industrial Water for Pulp, Paper, and Paperboard Manufacture) has been the major project of the Water Committee for two years preceding its publication. Publication was accomplished and copies of the monograph distributed to all members in February, 1942. The monograph has found a favorable reception and the sale of copies since its publication has exceeded expectations.

The authors of the monograph are: John D. Fleming (Monsanto Chemical Co.), Edward S. Hopkins (Bureau of Water Supply, City of Baltimore), C. E. Imhoff (Allis-Chalmers Mfg. Co.), Ronald G. Macdonald (TAPPI), R. B. Martin (Wallace and Tiernan Co.), Lewis B. Miller (W. H. and L. D. Betz), Eskel Nordell (The Permutit Company), Roderick O'Donoghue (Consulting Engineer, New York), J. G. Patrick (West Virginia Pulp and Paper Co.), Everett P. Partridge (Hall Laboratories Inc.), and Vincent F. Waters (TAPPI).

Process Water for Fine Papers

An earlier phase of this investigation dealt with the quality of water required for paper manufacture in general and resulted in TAPPI Special Report 298 dealing with this subject. It was found that the information obtained during the above investigation was too general to permit the preparation of water quality specifications. During the current year, therefore, the investigation was narrowed to the consideration of water requirements for the manufacture of fine papers. A questionnaire was distributed to the manufacturers of fine papers and the data obtained is now being tabulated and studied. It is anticipated that a report will be issued early in 1943.

Methods of Recovery of Wastes from White Waters

This is a new project. A good beginning has been made in collecting and assembling information on this subject. The work will be continued during 1943.

Annual Development Report

The Water Committee is making a consistent effort each year to prepare a reasonably complete report of important progress in the science and technology of water with the thought that such a survey has not only current interest but also permanent value. The report for 1941 was published in *Paper Trade Journal* for April 16, 1942, pages 38-44 and also in the *Technical Association Papers* for 1941. The report included reference to 225 articles selected as being outstanding and representative of the technical literature on water during this year.

Water Session at 1942 Annual Meeting

At the Annual Meeting of TAPPI held in New York City in February, 1942, a Water Session was sponsored by the Water Committee. The following papers were presented.

1. Water Treatment for the Pulp and Paper Industry by W. R. Gibson.
2. The Spiractor Lime-Soda Softener by Howard L. Tiger and Martin E. Gilwood.
3. Chemical Character of Water Available for Pulp and Paper Manufacture in the United States by W. D. Collins.
4. Calcium Bicarbonate Removal from Water Benefits Sulphate Mills by H. W. Frazer.
5. Flotation Treatment of White Water by E. N. Poor and H. A. Whitenight.
6. The Ranney Water Collector by J. F. Rhoades.

Water Session at 1943 Annual Meeting

A Water Session is being prepared for the Annual meeting to be held in New York City, February 15-18, 1943. The program will include a short symposium on pulp washing, a resume of the chlorine and ammonia situation as affecting the paper industry, and one or two papers dealing with case histories of water treatment in the paper industry.

Australia Buys Pulp

Despite transportation irregularities and other difficulties Australia is still purchasing shipments of B.C. pulp from the Powell River Company at Powell River, B. C. and the B. C. Pulp and Paper Company at Ocean Falls, B. C. These shipments are being sent to Australia to mix with pulp produced and developed at the newsprint mills established a short time ago in the Derwent Valley, Tasmania. These Tasmania mills were built under the supervision of engineers who went from British Columbia to perform that task. Much of the experimental work in connection with the construction of these mills and in the designing of equipment was carried out in British Columbia plants, shipments of Australian wood being sent to Canada for the purpose of making test runs.

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* To be presented at the Annual Meeting of the Technical Association of the Pulp & Paper Industry, Hotel Commodore, New York, N. Y., Feb. 15-18, 1943.

[1] Member TAPPI; Chairman, TAPPI Water Committee; Consulting Chemical Engineer, W. H. & L. D. Betz, Philadelphia, Pa.

Index, Technical Section, Paper Trade Journal Volume 115, July to December, 1942

Prepared by Clarence J. West, Chairman, Com mittee on Abstracts and Bibliography, TAPPI

The page numbers in the following index refer to the continuous pagination of the *Technical Section* and not to the pagination of the individual numbers of the PAPER TRADE JOURNAL. Author entries are printed in capitals.

To Facilitate Reference

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Ten Commandments for Motors

Electric motors are the muscles of industry and if they are regularly serviced they will give dependable, long-time service. But neglect leads to breakdowns—with consequent interruptions in production—and, perhaps, to fire.

The following ten commandments of motor maintenance should always be observed, but, at the same time, shops where motors are used should always be protected with suitable types of approved fire extinguishers. Vaporizing liquid and carbon dioxide are suitable for this purpose since their contents are non-conducting and will not cause corrosion or otherwise damage motors.

I. Open-type motors should be blown out weekly; those operating under severe conditions, daily. Use no more than fifty pounds of pressure to avoid possible damage to insulation.

II. Follow manufacturer's instructions in lubricating motors. Too much oil is as bad as too little, causing deterioration of insulation.

III. Inspect bearings weekly or oftener. Feel temperatures, examine for excessive end play, and make certain oil rings are working.

IV. Inspect brushes and commutators weekly or oftener. Make certain brushes are seated perfectly and commutators are smooth. Use proper grade of carbon brushes to prevent wear of commutator and reduce sparking.

V. Where motors operate with excessive belt tension, check the air gap between rotor and stator every week. A monthly check of motors in average use is sufficient. Difference in the width of the gap around the circumference of the rotor will indicate extent of wear on bearings.

VI. Where motor leads are exposed to view, check them weekly to see that connections are tight, well insulated and protected, and free from oil.

VII. Inspect ground connections weekly, keeping them tight and in good condition. This is for the protection of employees, and for the proper operation of over-current protective devices.

VIII. Set up a regular schedule for overhauling motors. Most motors should be overhauled annually, while those in severe use should be overhauled twice a year or oftener.

IX. Dismantle the motor for a complete overhaul job. Wash all parts with carbon tetrachloride or some other safety solvent. Paint the winding with a good, oil-resisting insulating varnish.

X. Keep the area around the motor as clean as the motor. Arcing frequently ignites oily material that has not been cleaned up.

When fire breaks out in or around a motor, shut off the power before attacking the flames, if possible. Do not depend upon the circuit breaker operating or a fuse blowing out, but shut off the power. This will minimize damage to the motor and prevent continued arcing from re-igniting the fire. When the motor or conductors are dead, direct the fire extinguishing agent into the motor or upon whatever is burning, just as in any other fire. As soon as the fire is out, ventilate the area thoroughly to clear out smoke and fire gases.

New Cyanamid Products

The American Cyanamid Company lists the following among its important developments of the past year:—

New efficiency in producing paper having high wet strength combined with enhanced dry strength and resistance to folding was achieved by the development of a Melmac resin suitable for addition to paper pulp in the beater before the sheet is formed. This resin (Paper Resin 605) is added to the paper pulp in the form of an acid solution and is of such a nature that it is adsorbed by the paper fibers. The treated pulp is made into a sheet in the customary manner on the normal paper making machine without requiring modification of either machine or operation. The resin added in the beater changes the water absorption to an inappreciable extent but enhances the effectiveness of water resistant sizes that may also be added. Resistance of the sheet to rubbing when wet is also much increased. The special importance of the process lies in the fact that no changes in equipment of paper mill are necessary to produce the improved sheet with this resin. Applications of high wet strength paper are in producing weather resistant cartons, in bags and wrappings for vegetables and other moist materials (to release cloth), in paper towels and in blue print paper where high wet strength is important in fast processing of prints and where fold resistance lengthens the service life of the finished prints.

Alwax Size 270-C is a new wax emulsion especially designed for sizing asbestos papers to increase their resistance to moisture. This particularly difficult problem is solved by the new size which can be applied in usual equipment and imparts to the asbestos sheet a water resistance equivalent to that of cellulose papers.

Michigan Superintendents and Technical Men Meet at Kalamazoo

KALAMAZOO, Mich., January 8, 1943—The eighth annual joint meeting of the Kalamazoo Valley Section of the Technical Association of the Pulp and Paper Industry and the Michigan Division of the American Pulp and Paper Mill Superintendents Association was held at the Park American Hotel on Thursday evening, January 7, 1943 at 6:30 o'clock with 325 seated at the banquet tables.

Fred Elliot Presides

Fred Elliot, chairman of the Kalamazoo Valley Section of the Technical Association of the Pulp and Paper Industry, presided as chairman of the meeting and in his opening remarks thanked the various committees who worked with him to promote and make the joint meeting a marked success. He introduced Allen B. Milham, president and general manager of the Bryant Paper Company, who had consented to serve as toastmaster in the absence of Dwight Stocker, president of the Michigan Paper Company, who had been called to Washington. Mr. Milham read telegrams from the following members and associates, expressing their regrets at being unable to attend. Robert L. Eminger, national secretary of the American Pulp and Paper Mill Superintendents Association; D. C. Everest; Sanford Blankenship, 1st vice president of the American Pulp and Paper Mill Superintendents Association; John Cornell, publisher *Paper Mill News* and Otto Kress of the Institute of Paper Chemistry.

Make Brief Addresses

The following members were introduced and gave brief talks: Grover Keeth, national president of the American Pulp and Paper Mill Superintendents Association, who welcomed the members and guests and announced that the dates selected for the National Convention were June 15, 16 and 17 at the Commodore Hotel, New York, and stated that he was reasonably sure that the war conditions would not prevent the holding of the meeting; E. D. Hyndman, chairman of the Technical Section of the Canadian Pulp and Paper Association, spoke briefly; also V. E. Fisburn, vice president of the Burgess Cellulose Company, Freeport, Ill.; R. G. Macdonald, national secretary of the Technical Association of the Pulp and Paper Industry, stated that this was the seventh joint meeting he had attended and announced that the annual meeting of the American Paper and Pulp Association would be held February 15 to 19 inclusive and urged all who possibly could to attend. Ray L. Barton, 2nd vice president of the Superintendents Association gave a very interesting account of the get together session of the Groveton Alumni which was being held in connection with the joint meeting. Nine men, all formerly associated with the paper mill at Groveton, N. H., were in attendance at the meeting. Their names and present connections are as follows: V. E. Fishburn, vice president, Burgess Cellulose Company; E. D. Hyndman, Anglo Canadian Pulp and Paper Company, Ltd.; E. G. Walker, French Paper Company; J. C. Nutter, Gair Company of Canada, Ltd.; Henry Vernon, Kalamazoo Vegetable Parchment Company; M. S. Fogerty, W. H. Astle and Ray L. Barton, Michigan Paper Company; A. M. Vandenberg, retired. All were duly introduced.

Committee members on arrangements including Messrs. Elliot, Perlick, Sutton, Taylor, Hamilton, Sermanson, Chappell, Nendorf, Atkins and Waber, were also introduced.

No meeting would be complete without an introduction and response of the veteran Barney Benson and this occasion was no exception.

Ralph Hayward Speaks

Ralph Hayward, president of Kalamazoo Vegetable Parchment Company and national president of the Technical Association of the Pulp and Paper Industry, delivered a detailed discription of the paper industry's operation under government restrictions during the past two and one-half years.

Herman Whitman Speaks

John G. Strange, who was to have been the principal speaker, was at the last minute obliged to cancel his engagement and instead sent his deputy, Herman Whitmore.

Discussing the purposes of the WPB's war products development section within the pulp and paper division, Mr. Whitmore said that careful analysis of the scarce or critical raw materials supports the conclusion that pulp and paper are the last of the "significant materials" reasonably available.

"It is incumbent, therefore, upon this industry," he said, "to do everything that it can to produce for winning the war and to relieve the burdens which scarce materials are carrying.

He described the paper and pulp industry as "tremendously eager" to do more in the war effort, picturing it as a "large and versatile industry . . . flushed with the desire to serve. . . ."

Even now, said Mr. Whitmore, "essential applications" of paper are taking hundreds of thousands of tons of fiber.

The WPB pulp and paper division section has been considering problems coming under two classifications, he said: To discover the exact needs, from quality and quantity standpoints, for specific types of paper or paper products, and to aid in the development of new papers or paper products to meet new requirements.

He described the former as "search" work, and the latter as "research," and placed in the "search" class the new high strength paper base plastic laminates. The plastic laminates, composed of 65 per cent paper and 35 per cent phenolic resin, are of sufficient strength to adequately substitute for metals in many places, while the lower molding pressures expand conversion possibilities and circumvent, to a degree, the equipment bottleneck which would be involved if the high pressures normally used in the laminating industry were necessary, he asserted.

Another field "in the limelight," Mr. Whitmore said, is that of packaging dehydrated foods. Studies now are being made of the impervious paper field, he explained, with a detailed report expected within a few weeks.

IMPORTS OF PAPER

NEW YORK IMPORTS

WEEK ENDING JANUARY 9, 1943

CASEIN

Scheerer Leather Co., ——, ——, 11 bags.

BONES

——, ——, ——, 1973 bags.
——, ——, ——, 1404 bags.
——, ——, ——, ——, 845 bags.

GLUE STOCK

H. Remis, ——, ——, 307 bls.

BONE GLUE

——, ——, ——, 600 bags.

Condensed Chemical Dictionary

The third edition of The Condensed Chemical Dictionary, published by the Reinhold Publishing Corporation, is of especial value in the present critical period. The chemical industry is today called upon to furnish products in great diversity. Executives and business men are straining every resource to provide raw materials to keep their plants in operation.

The latest edition of The Condensed Chemical Dictionary, thoroughly revised and up to date, contains the names of approximately 18,000 chemicals, and their synonyms, with chemical formulas, colors, properties, constants, etc. It covers the preparation of materials, with an outline of the process, grades, uses and the types of containers in which they are customarily shipped. New encyclopedic terms give information on a variety of raw materials and important industrial processes.

The book contains 756 pages, is durably bound. The price is $12. Copies may be obtained from the office of the PAPER TRADE JOURNAL, 15 West 47th street, New York.

Supply Dealers to Hold Banquet

The thirty-fifth annual dinner of the New York Association of Dealers in Paper Mills' Supplies, Inc., will be held in the Grand Ballroom of the Commodore Hotel, Pershing square, New York, at 7:30 sharp, Tuesday evening, February 16. The committees in charge of the affair are as follows:—

Banquet Committee:—Walter H. Martens, chairman; John L. Nielsen and Arthur Rosenfeld. Journal Committee:—Alfred J. Moran, chairman; Bert Lorenz, Joseph P. Graccione, Joseph V. Carrano and Miss Shirley Rief. Reception Committee:—William C. Steck, chairman.

The officers of the association are as follows:—John L. Nielsen, president; Gus R. Holm, first vice president; Paul J. White, second vice president; Alfred J. Moran, secretary-treasurer, 30 Main street, Brooklyn, N. Y., telephone Triangle 5-6787.

Tacoma Paper Co. Changes Name

The Tacoma Paper and Stationery Company, Tacoma, Wash., as of January 1, 1943, became Blake, Moffitt & Towne, Inc., Tacoma Division. It is stated by the company that there is no change other than the name, the personnel of the company remaining the same.

Manhattan Forms First Aid Detachment

The first American Red Cross First Aid Detachment to be organized in an industrial plant under the auspices of the Passaic, N. J., Chapter has been formed at the plant of the Manhattan Rubber Manufacturing Division of Raybestos-Manhattan, Inc. The Passaic Chapter has supervision over Red Cross activities in the busy industrial communities of Passaic, Garfield and Wallington.

The detachment is designed to function in disasters of any nature, including bombings, sabotage, explosions, fires and floods, and would assist the plant doctor and hospital staff. Ordinarily it would not leave the Manhattan plant. However, in the event of an air raid causing many casualties in other localities, the Manhattan squad would be available for emergency calls.

Four casualty stations have been set up at Manhattan. Employees forming the detachment are all Advanced First Aiders or Instructors and hold practice and drill sessions once each month.

Chile Makes Print Paper Duty-free

Paper of specified qualities imported into Chile for use exclusively in the printing of newspapers, magazines, and books, has been exempted from payment of import duty under provisions of Chilean decree, according to a report to the Commerce Department.

The provision for duty-free entry is limited to paper weighing less than 165 grams per square meter, white or lightly tinted, containing more than 30 percent of mechanical pulp, watermarked by means of parallel lines spaced at intervals of 4 centimeters, and unsuitable for use with writing ink.

The decree also excludes from entry under the provisions of the tariff item covering printed books and magazines, bulk shipments of periodicals imported for use as wrapping paper, over-issue magazines and newspapers, and imported publications without title or date, having blank space for reprinting, or which from their format convey the impression that they were printed in Chile.

Hubbs Produces Mouth Mask

Charles F. Hubbs & Co., 383-389 Lafayette street, New York, is producing a mouth mask of paper for which it is having a widely expanding demand from paper jobbers. The mask is used principally by doctors, nurses, mothers attending babies to prevent the transmission of colds, and in industrial plants where there is an excessive amount of dust or in food plants to prevent contamination of food. The mask is strongly made of paper with fancy twine to tie to the face.

H. J. Hodgins Heads Victoria Foresters

H. J. Hodgins was recently elected as chairman of the Victoria, B. C., section of the Canadian Society of Forest Engineers. Other officers are: vice-chairman, E. W. Bassett; public relations counsel, G. P. Melrose; representative on general executive board, A. P. MacBean; representative on editorial board, F. S. McKinnon.

New York Paper and Pulp Market Review

WPB Inventory Control Limitation Order L-219, Issued December 29, 1942, Affects Paper Merchants With Inventories of $50,000 Up —New Wood Pulp Equalizing Order Issued—Waste Paper Active.

Office of the PAPER TRADE JOURNAL.
Wednesday, January 13, 1943.

Demand for many classes of paper continues upward, after the lull during the year-end inventory period. Reports received from many manufacturers' representatives, jobbers, and general paper merchants this week, indicate that the talk of shortages has greatly stimulated demand.

Buying for the future, or the accumulation of inventories of consumers' goods above average needs will, however, be controlled by Limitation Order L-219, which includes paper, paper products, stationery, books, gift wares and all important classes of consumers' goods. This order was issued December 29, 1942, by Ernest Kansler, Director General for Operations, War Production Board. It becomes effective at the beginning of a merchant's second quarter in 1943. This may be March 1, 1943, if the inventory year began December 11; on April 1, 1943, if the inventory year began January 1, and on May 1, 1943, if the inventory year begins February 1. All merchants (wholesalers, jobbers and retailers), doing a business of $200,000 in the inventory year of 1942, and who had inventories of $50,000 on the last day of 1942, are subject to this order.

The index of general business activity for the week ended January 2, 1943, declined to 136.4%, from 138.1% for the preceding week, compared with 137.4% for the corresponding week last year. The index of paper board production for the week ended January 2, 1943 was 131.6%, compared with 146.1% for December 26, 1942, and with 167.5% for the week ended January 3, 1942.

Paper production for the week ended January 2 was estimated at 73.6%, compared with 102.2% for 1942, with 80.8% for 1941, with 82.5% for 1940, and with 69.8% for the corresponding week for 1939.

Paper board production for the week ended January 2 was 62.0%, compared with 86.0% for 1942, with 49.0% for 1941, with 65.0% for 1940, and with 45.0% for the corresponding week for 1939.

Wood Pulp

Equalization of transportation costs between producer and consumer on shipments of wood pulp from Canada to the U. S. was sought in Amendment No. 5 to Maximum Price Regulation No. 114 (wood pulp), effective January 12, 1943. The order states that, in most cases, it will result in no increase in costs to wood pulp consumers in the U. S.; in a few cases, it is believed that the total costs of the Canadian wood pulp to U. S. consumers, will be comparable to the costs of shipments from the West Coast of the U. S., that have been displaced now by the amendment. Shipments originating in Newfoundland, are not covered.

Rags

Demand for new cotton cuttings is more active at this date. Reports of limited supplies are current in the market. Current quotations for new papermaking rags are as follows, per cwt.: new white No. 1 shirt cuttings, 6.50 to 6.75; new unbleached, 6.50 to 6.75; blue overall, 5.00 to 5.25; fancy, 3.50 to 3.75; washables, 2.75 to 3.00; mixed khaki cuttings, 2.75 to 3.00; O. D. khaki cuttings, 3.25 to 3.50.

The OPA has issued Maximum Price Regulation No. 47, covering waste rags, waste ropes and waste strings, effective January 11, 1943. It covers prices, imports and exports, licensing, enforcement, records and reports required and definitions of grades.

Old Rope and Bagging

The OPA Maximum Price Regulation No. 47, now in effect, establishes the following ceiling prices, per short ton, f.o.b., point of shipment: No. 1 large old Manila rope, $115; No. 1 small old Manila rope, $105; greasy transmission rope, $60; uncut Manila fenders, $105; No. 1. clean bright sisal strings, $80; No. 2 sisal strings, $60; No. 1 large old sisal rope, $95; No. 1 small old sisal rope, $85.

Old Waste Paper

The old waste paper market is active with prices stronger. Current quotations, on leading grades are as follows, per cwt.: No. 2 fly leaf shavings, .70 to .75; No. 2 mixed groundwood fly leaf shavings, .70 to .75; overissue magazines, 1.40 to 1.50; No. 1 heavy books and magazines, 1.30 to 1.40; mixed books, .70 to . 75; brown soft kraft, 1.60 to 1.75; new 100% kraft corrugated cuttings, 1.60 to 1.75; new jute corrugated cuttings, .65 to .70; box board cuttings, .35 to .40; white blank news, 1.60 to 1.65; No. 1. news, .70 to .75; No. 1 mixed paper, .35 to .40; and old corrugated containers, .65 to .70.

Twine

Demand continues active on standard grades of twine Amendment of WPB Order M-36, directs that during 1943, amounts of Manila fiber to be processed into cordage, in any month, for permitted civilian use, cannot be over 20% of the total amount of Manila fiber permitted to be processed into cordage during that month. Present limitations on agave cordage for civilian use are continued.

Wm. Fitzhugh To Be Div. Consultant

William Fitzhugh, deputy director of the Containers Division, WPB, has resigned his post to rejoin his company, the W. W. Fitzhugh Company, New York, but will continue as chief consultant to the division. He will be succeeded by R. C. Mower, formerly assistant director.

F. A. Reed Inc. Opens New York Office

F. A. Reed, Inc., Albion, N. Y., manufacturers of Fibrok custom-made and semi hand-made paper bags, covers, waterproof liners and fruit growers supplies, have opened a New York office at 55 West 42nd street under the direction of Harold M. Fox, well known in the paper bag industry.

"NON-USERS ARE THE LOSERS"

PROFIT PRODUCERS

TENAX FELTS

KNUCKLE DOWN!

Unusual problems confront all paper and board producers as we enter another war year. TENAX FELTS grimly accept the challenge of the times. They will run continuously, if necessary, and last longer. Now is your opportunity to clothe your machines with tenacious TENAX FELTS. They have produced profits for their users for more than fifty years.

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LOCKPORT FELT COMPANY

Newfane, N. Y. — U.S.A.

sonoco cores

can take it

RHINO NON-RETURNABLE

For all uses requiring an extremely tough non-returnable paper mill core.

TAYLOR ENDS

DURO—Standard returnable core of plus-standard quality. Shown with Taylor ends. Also available with Bermico ends.

BERMICO ENDS

ENDURO—Very high grade returnable core to meet extra demand for strength. Shown with Bermico ends—Taylor ends available.

BERMICO*

*Exclusive distributors for Bermico ends Bermico Fibre Cores

BERMICO—A returnable fibre core—extremely hard, strong and rugged. Treated to resist weather and moisture changes.

SONOCO PRODUCTS COMPANY

BRANTFORD ONT. HARTSVILLE S. C. MYSTIC CONN.

SHIPPING POINTS: LOWELL, MASS. HARTSVILLE, S. C.

DEPENDABLE SOURCE OF SUPPLY

MISCELLANEOUS MARKETS

Office of the PAPER TRADE JOURNAL.
Wednesday, January 13, 1943.

BLANC FIXE—Quotations on blanc fixe are firm and continue unchanged at prevailing market levels. The pulp is currently quoted at $40 per ton in barrels, at works; the powder is offered at $60 per ton, f.o.b. works. Demand reported fair for the week.

BLEACHING POWDER—Prices on bleaching powder are firm. Current demand reported heavy. Bleaching powder is currently quoted at $2.50 per 100 pounds, in drums, at works.

CASEIN—Quotations on casein are unchanged for the week. Sandard domestic casein, 20-30 mesh, is quoted at 21 cents per pound; 80-100 mesh at 21½ cents per pound; all prices in bags, car lots. Argentine casein, 20-30 mesh is currently quoted at 9 cents per pound, c.i.f. No quotations on French casein.

CAUSTIC SODA—Prices on caustic soda are reported unchanged. Demand for the current week is reported more active. Solid caustic soda is currently quoted at $2.30 per 100 pounds, flake and ground at $2.70 per 100 pounds, in drums, at works.

CHINA CLAY—Quotations on china clay are firm and continue unchanged. Demand reported fair for the current week. Domestic filler clay is currently quoted at from $7.50 to $15 per ton; coating clay is quoted at from $12 to $22 per ton at mine. Imported clay is quoted at from $13 to $25 per long ton, ship side.

CHLORINE—Quotations on chlorine unchanged. Government demand for war use continues heavy. Chlorine is currently quoted at from $1.75 per 100 pounds, in single-unit tank cars, f.o.b. works.

ROSIN—Quotations on some grades of rosins are higher for the current week. "G" gum rosin is currently quoted at $3.50 per 100 pounds, in barrels, Savannah. "FF" wood rosin is currently quoted at $3.41 per 100 pounds, in barrels, New York. Seventy per cent gum rosin size is quoted at $3.63 per 100 pounds, f.o.b. works.

SALT CAKE—Prices on salt cake are firm. Demand reported moderate for the current week. Domestic salt cake is currently quoted at $15 per ton in bulk; chrome salt cake at $16 per ton. All prices in car lots, f.o.b., shipping point. Quotations on imported salt cake are nominal at $16 per ton.

SODA ASH—Quotations on soda ash are firm and continue to conform to prevailing market quotations. Demand active. Quotations on soda ash in car lots, per 100 pounds, are as follows: in bulk, $.90; in paper bags, $1.05; and in barrels, $1.35.

STARCH — Prices on corn starch continue unchanged for the current week. Pearl is currently quoted at $3.10 per 100 pounds; powdered starch at $3.20 per 100 pounds; all prices in bags, car lots, f.o.b., Chicago.

SULPHATE OF ALUMINA — Quotations on sulphate of alumina are firm. Demand reported light. The commercial grades are currently quoted at $1.15 per 100 pounds; iron free at from $1.75 to $1.83 per 100 pounds, in bags, car lots, f.o.b., works.

SULPHUR—Prices on sulphur are firm and continue to conform to prevailing market quotations. Annual contracts are currently quoted at $16 per long ton, f.o.b., mines. Spot and nearby car lots are quoted at $18 per ton.

TALC—Quotations on talc are firm and continue unchanged at prevailing market prices. Domestic talc is currently quoted at from $16 to $21 per ton, at mills. No quotations on imported talc.

MARKET QUOTATIONS

All market quotations, excepting those otherwise designated as official OPA maximum prices, are based on the manufacturers' price level as of October 1-15, 1941; maximum wholesale prices are based on the merchants' maximum prices for stipulated quantities at a quoted price to all customers of a like class, as shown by the merchant's sales records of goods delivered during March, 1942. A merchant's price list in effect in March 1942, showing quotations of actual shipments, will establish the current maximum prices.

Paper

(Delivered New York)

News, per ton—			
Roll, contract	$50.00	@	—
Sheets	58.00	"	—
Kraft—per cwt.—Carload Quantities Zone A, f.o.b. Mill			
Superstandard Wrapping	$5.00	@	—
No. 1 Wrapping	4.75	"	—
Standard Wrapping	4.50	"	—
Standard Bag	4.125	"	—
Tissues—Per Ream—Carlots			
White No. 1	1.12½	"	—
White No. 1 M. G.	1.05	"	—
White No. 1½	1.00	"	—
White No. 2	1.00	"	—
Anti-Tarnish M. G.	.95	"	—
Colored	—	"	—
Kraft	.95	"	—
Manila	.90	"	—
Unbl. Toilet, 1 M.	4.16	"	—
Bleached Toilet	5.70	"	—
Paper Towels. Per Case—			
Unbleached, Jr.	2.35	"	—
Bleached, Jr.	2.65	"	—
Manila—per cwt.—C. l. t. s			
No. 1 Jute	11.25	@	—
No. 1 Manila Wrapping, 35 lb.	5.50	"	5.75
No. 2 Manila Wrapping, 35 lb.	5.25	"	5.50
Boards, per ton—			
News	*48.00	@	—
Chip	*45.00	"	—
Sgl. Mla. Lt. Chip	*60.00	"	—
White Pat. Coated	*75.00	"	—
Kraft Liners 50 lb.	*60.00	"	—
Binders Boards	84.00	"	116.00

* OPA Base Prices per 10 tons. Less than 10 tons but over 3 tons, add $2.50; three tons or less, add $5; regular 35-39 basis, add $5.; basis 40-49, add $2.50; basis 91-100, add $2.50; basis 101-120, add $5.

The following are representative of distributors' resale prices:

Rag Content Bonds and Ledgers—White, Assorted Items, Delivered in Zone 1:

	Bonds	Ledgers
100% Rag Ext. No. 1	$39.10@$46.00	$40.25@$47.25
100% Rag	32.20 " 37.75	33.35 " 39.25
85% Rag	.... "	29.90 " 35.00
75% Rag	23.00 " 27.00	24.15 " 28.25
65% Rag	.... "	22.80 " 27.75
50% Rag	18.70 " 22.75	19.90 " 24.25
25% Rag	16.40 " 20.00	17.55 " 21.50

Colors at $1.00 cwt. extra.

Sulphite Bonds and Ledgers—White, Assorted Items. Delivered in Zone 1:

	Bonds	Ledgers
No. 1	$10.55@$12.75	$11.70@$14.25
No. 2	9.65 " 11.75	10.80 " 13.25
No. 3	9.20 " 11.25	10.35 " 12.50
No. 4	8.90 " 10.75	10.05 " 12.25

Colors $1.00 cwt. extra.

Free Sheet Book Papers—White. Cased Paper

Delivered in Zone 1

No. 1 Glossy Coated	$13.65@	$13.3
No. 2 Glossy Coated	12.40 "	14.00
No. 3 Glossy Coated	11.60 "	13.25
No. 4 Glossy Coated	11.15 "	12.75
No. 1 Antique (watermarked)	10.25 "	11.75
No. 2 Offset	9.60 "	11.00
A Grade E. F.	9.35 "	10.75
A Grade S. & S. C.	9.60 "	11.00
B Grade E. F.	8.85 "	10.25
B Grade S. & S. C.	9.10 "	10.50
C Grade E. F.	8.55 "	9.75
C Grade S. & S. C.	8.80 "	10.00
D Grade E. F.	8.25 "	9.50
D Grade S. & S. C.	8.50 "	9.75

Ivory & India at $.50 cwt. extra.

Wood Pulp

OPA Maximum Prices and Canadian Manufacturers Prices, Less Freight to Destination.

Bl. Softwood Sulphite	$76.00
Unbl. Softwood Sulphite	64.00@ 66.00
Bl. Hardwood Sulphite	73.50
Unbl. Hardwood Sulphite	63.50
Bl. Mitscherlich	81.00
Unbl. Mitscherlich	72.00
N. Bleached Sulphate	86.00
S. Bleached Sulphate	79.00
N. Semi-Bleached Sulphate	82.00
S. Semi-Bleached Sulphate	75.00
N. Unbl. Sulphate	73.00
S. Unbl. Sulphate	63.50
Bl. Soda	66.00
Unbl. Soda	62.00
Groundwood	46.00

Transportation Allowances

Applying to Producers of Wet Wood Pulp.

	Below 50% Air Dry Weight
Northeast	$13.50
Lake Central	13.50
Southern	16.00
West Coast (in area)	10.50
West Coast (out area)	16.50

	50%-80% Air Dry Weight
Northeast	$11.50
Lake Central	11.50
Southern	14.00
West Coast (in area)	9.50
West Coast (out area)	15.50

Applying to Producers of Dry Wood Pulp.

	Above 80% Air Dry Weight
Northeast	$8.50
Lake Central	8.50
Southern	11.00
West Coast (in area)	7.50
West Coast (out area)	13.50

Should freight charges actually exceed these allowances, the difference may be added to the maximum prices.

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1	6.50	@	6.75
Silesias No. 1	4.50	"	4.75
New Unbleached	6.50	"	6.75
Blue Overall	5.00	"	5.25
Fancy	3.50	"	3.75
Washables	2.75	"	3.00
Mixed Khaki Cuttings	2.75	"	3.00
O. D. Khaki Cuttings	3.25	"	3.50

AROUND THE CLOCK FOR THE ARMY AND THE NAVY

Seven days a week—Twenty-four Hours each day, the men and machines which formerly built paper converting equipment are now engaged in producing for defense.

Our own production has been set aside until our national needs are satisfied. Some of the machines you have ordered may be among the pieces of equipment which this program will affect.

We regret that we must hold their delivery until we are again permitted to return to production for civilian needs.

In the meantime we will be glad to serve you with repairs to machines you now have, where such orders are accompanied by proper priorities.

HUDSON-SHARP
MACHINE CO • GREEN BAY • WIS

More than just a

EXCELSIOR KNOX Woolen Co. Camden, Me. FELTS & JACKETS

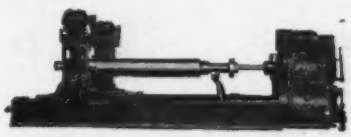
TRADE MARK

BUT also a guarantee by men who for 78 years have prided themselves in making finer felts. TO YOU —this is the mark of dependability, longer felt life and greater saving.

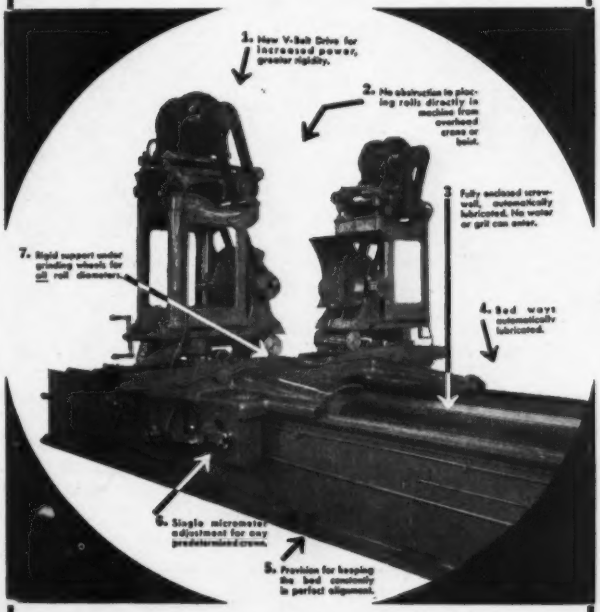
KNOX WOOLEN CO.
CAMDEN, MAINE.

ROLLS REGROUND

faster—easier



With a Lobdell Roll Grinder, rolls are resurfaced accurately and are back in the stack with the very minimum loss in time. Lobdell Grinders are designed by engineers thoroughly familiar with paper mill requirements; they are substantially proportioned, generously powered, and retain their accuracy throughout their long life. Note the important advantages and conveniences shown below; you'll soon see why Lobdell is the choice of more than seventy leading mills. *Want more information?* Just write (on your letterhead, please.)


1. New V-Belt Drive for increased power, greater rigidity.
2. No obstruction to placing rolls directly in machine from overhead crane or hoist.
3. Fully enclosed screw-feed, automatically lubricated. No water or grit can enter.
4. Bed ways automatically lubricated.
5. Provision for keeping the bed constantly in perfect alignment.
6. Single micrometer adjustment for any predetermined crown.
7. Rigid support under grinding wheels for all roll diameters.

LOBDELL

COMPANY

Wilmington, Delaware

108 Years in Business

Also makers of Lobdell Calender Stacks and Lobdell Micrometer Roll Calipers. Lobdell "Puraloy" Rolls, developed by us to meet the severe conditions for water finished papers, are *not obtainable* for the duration.

Old Rags

White, No. 1—			
Repacked	*1.80	"	—
Miscellaneous	*1.20	"	—
White, No. 2—			
Repacked	*2.90	"	—
Miscellaneous	*2.65	"	—
Third and Blues—			
Repacked	*2.20	"	—
Miscellaneous	*1.80	"	—
Roofing Rags—			
No. 1	*1.55	"	—
No. 2	*1.45	"	—
No. 3 (bagging)	*1.35	"	—
No. 4	*1.35	"	—
No. 5A	*1.35	"	—
Old Manila Rope	5.75	"	—

OPA Maximum Prices.

Foreign Rags

All prices nominal

New Rags			
New Dark Cuttings	2.25	@	2.40
New Mixed Cuttings	2.00	"	2.20
New Light Silesias	5.50	"	5.75
Light Flannelettes	5.50	"	5.75
New White Cuttings	7.00	"	7.50
New Light Oxfords	4.00	"	4.50
New Light Prints	3.00	"	3.25
Old Rags			
No. 1 White Linens	7.50	"	8.50
No. 2 White Linens	6.50	"	7.50
No. 3 White Linens	4.50	"	—
No. 4 White Linens	2.25	"	3.25
No. 1 White Cotton	4.25	"	4.75
No. 2 White Cotton	3.25	"	3.75
No. 3 White Cotton	2.50	"	3.00
No. 4 White Cotton	1.90	"	2.20
Extra Light Prints	2.00	"	2.40
Ord. Light Prints	1.75	"	2.15
Med. Light Prints	1.55	"	1.95
Dutch Blue Cottons	2.25	"	2.50
French Blue Linens	3.00	"	—
Checks and Blues	2.00	"	—
Linsey Garments	1.90	"	2.00
Dark Cottons	1.50	"	1.60
Old Shopperies	1.30	"	1.45
New Shopperies	1.45	"	1.50
French Blues	2.25	"	2.50

BAGGING

(Prices to Mill, f. o. b. N. Y.)

Gunny No. 1—			
Foreign	Nominal		
Domestic	4.00	@	4.25
Wool Tares, light	4.25	"	4.50
Wool Tares heavy	4.50	"	4.75
Bright Bagging	4.50	"	4.85
Manila Rope—			
Foreign	—	"	—
Domestic	*5.75	"	—
Jute Threads	4.25	"	4.75
Sisal Strings	*3.00	"	4.00
Mixed Strings	*2.10	"	2.20

* OPA Maximum Price.

Old Waste Papers

(F. o. b. New York)

OPA Maximum Prices

No. 1 Hard White Envelope Cuts, one cut	3.37½	@	—
No. 1 Hard White Envelope Cuts	3.12½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
No. 1 Hard White Shavings, ruled	2.50	"	—
Soft White Shavings, one cut	2.87½	"	—
No. 1 Soft White Shavings	2.50	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Mixed Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
Mixed Groundwood Colored Shavings	.90	"	—
Overissue Magazines	1.67½	"	—
No. 1 Heavy Books & Magazines	1.57½	"	—
Mixed Books	.85	"	—
No. 1 White Ledger	2.17½	"	—
No. 2 Mixed Ledger, colored	1.87½	"	—
New Manila Envelope Cuttings, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
Extra Manilas	1.85	"	—
Mixed Kraft, Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
Triple Sorted, No. 1 Brown Soft Kraft	2.50	"	—
New 100% Kraft Corrugated Cuttings	2.25	"	—
No. 1 Assorted Old Kraft	1.75	"	—
New Jute Corrugated Cuttings	.90	"	—
Old Kraft Corrugated Containers	1.50	"	—
Box Board Cuttings	.72½	"	—
White Blank News	1.65	"	—
Overissue News	.85	"	—
No. 1 News	.75	"	—
No. 1 Mixed Paper	.70	"	—
Old Corrugated Containers	.82½	"	—
Mill Wrappers	.85	"	—

Twines

(F. o. b. Mill)

(Soft Fiber)

Coarse Polished—			
India	.21	@	—
White Hemp	.21	"	—
Fine Polished—			
Fine India	.36	"	—
Unpolished—			
Box	.17¾	"	—
Paper Makers	.17	"	—
Tube Rope	.19	"	—
Wall Paper	.20½	"	—
Wrapping	.23	"	—
Soft Fiber Rope	.19	"	—
Cotton	.25	"	—
(Hard Fiber)			
Medium Java	.18	"	—
Mex. Sisal	.16	"	—
Manila	—	"	—

PHILADELPHIA

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White No. 1	.07¼	@	.07½
New White No. 2	.04½	"	.05
Light Silesias	.04½	"	.04¾
Silesias, No. 1	.04	"	.04¼
Black Silesias, soft	.03¼	"	.04
New Unbleached	.07¼	"	.07½
Washable Prints	.03¾	"	.03½
Washable No. 1	.02	"	.02¼
Blue Overall	.04½	"	.05½
Cottons—According to grades—			
Washable shredding	—	"	.01¾
Fancy Percales	.03¼	"	.03½
New Black Soft	.02¾	"	.03
New Dark Seconds	1.75	"	2.00
Khaki Cuttings—			
No. 1 O. D.	.03	"	.03¼
No. 2 Mixed	.02¼	"	.02½
Corduroy	.01¾	"	.02¼
New Canvas	.04¾	"	.05¼
New Black Mixed	—	"	.02½

Domestic Rags (Old)

White No. 1—Repacked	3.80	"	—
White No. 2—Repacked	2.90	"	—
Miscellaneous No. 1	3.20	"	—
Miscellaneous No. 2	2.65	"	—
Thirds and Blues—			
Miscellaneous	1.80	"	—
Repacked	2.20	"	—
Black Stockings—			
(Export)	Nominal		
Roofing Stock—			
Foreign No. 1	Nominal		
Domestic No. 1	1.55	"	—
Domestic No. 2	1.45	"	—
Roofing Bagging	1.35	"	—
Old Manila Rope	5.75	"	—

Bagging

(F. o. b. Phila.)

Gunny No. 1—			
Foreign	Nominal		
Domestic	3.00	"	3.50
Sisal Rope	3.75	"	—
Mixed Rope	.75	"	1.00
Scrap—			
No. 1	3.25	"	3.50
No. 2	1.75	"	1.80
Wool Tares, heavy	4.00	"	4.25
No. 1 New Light Burlap	3.00	"	4.00
New Burlap Cuttings	3.75	"	4.00

Old Papers

(F. o. b. Phila.)

OPA Maximum Prices

No. 1 Hard White Envelope Cuts, one cut	3.37½	"	—
No. 1 Hard White Shavings, unruled	2.50	"	—
Soft White Shavings, one cut	2.87½	"	—
White Blank News	1.65	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 White Ledger	2.17½	"	—
No. 2 Ledger, colored	1.87½	"	—
No. 1 Heavy Books & Magazines	1.57	"	—
Overissue Magazines	1.67½	"	—
New Manila Envelope Cuttings	2.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.70	"	—
Box Board Cuttings	.72½	"	—
Jute Corrugated Cuttings	.90	"	—
Overissue News	.85	"	—
No. 1 News	1.00	"	—

BOSTON

Old Papers

(F. o. b. Boston)

OPA Maximum Prices

No. 1 Hard White Shavings, unruled	2.87½	@	—
No. 1 Hard White Shavings, ruled	2.50	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
Hard White Envelope Cuts, one cut	3.37½	"	—
Triple Sorted No. 1 Brown Soft Kraft	2.50	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
No. 1 Heavy Books & Magazines	1.57	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
White Blank News	1.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.70	"	—
Overissue News	.85	"	—
Box Board Cuttings	.72½	"	—
New Corrugated Cuttings, Kraft	2.25	"	—
Old Corrugated Containers	1.00	"	—
Jute Corrugated Cuttings	1.07½	"	—

Bagging

(F. o. b. Boston)

Gunny Bagging—			
Foreign	(nominal)		
Domestic	3.50	@	4.00
Sisal Rope	4.50	"	4.75
Mixed Rope	1.35	"	1.50
Transmission Rope—			
Foreign	(nominal)		
Domestic	3.00	"	3.50
Manila Rope—			
Foreign	(nominal)		
Domestic	5.75	"	—
Soft Jute Rope	4.75	"	5.25
Jute Carpet Threads	3.25	"	3.50
Bleachery Burlap	8.50	"	9.00
Scrap Burlap—			
Foreign	(nominal)		
Domestic	3.50	"	3.75
Scrap Sisal	4.50	"	4.75
Scrap Sisal for Shredding	—	"	.04¾
Wool Tares—			
Foreign	(nominal)		
Domestic	5.00	"	5.75
Aust. Wool Pouches	5.10	"	5.25
New Burlap Cuttings	5.00	"	5.25
Heavy Baling Bagging	4.25	"	4.75
Paper Mill Bagging	2.75	"	3.00
No. 2 Bagging	1.35	"	—

* OPA Maximum Price.

Domestic Rags (New)

(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	.04½	@	.04¾
Fancy Percales	.04¼	"	.05
New White No. 1	.06¾	"	.06¾
New Light Flannelettes	.05½	"	.06
Canton Flannels, Bleached	.06	"	.06½
Underwear Cutters, Bleached	.06	"	.06½
Underwear Cutters, Unbleached	.05¾	"	.06
Silesias No. 1	.06	"	.06¼
New Black Silesias	.03	"	.03½
Red Cotton Cuttings	.03½	"	.04
Soft Unbleached	.06½	"	.06¾
Blue Cheviots	.05½	"	.06
Fancy	.02¾	"	—
Washable	.02¾	"	—
Khaki Cuttings	.02¾	"	.03
O. D. Khaki	.03½	"	.03¾
Corduroy	.03¼	"	.03½
New Canvas	.06¼	"	.06¾
B. V. D. Cuttings	.06¾	"	.06¾

Domestic Rags (Old)

(F. o. b. Boston)

White No. 1—Repacked	3.80	@	—*
White No. 1—Miscellaneous	3.20	"	—*
White No. 2—Miscellaneous	2.65	"	—*
Twos and Blues, Repacked	2.20	"	—*
Old Blue Overalls	2.25	"	2.30
Thirds and Blues, Repacked	2.20	"	—*
Miscellaneous	1.80	"	—*
Black Stockings	3.50	"	4.00
Roofing Stock—			
No. 1	1.55	"	—*
No. 2	1.45	"	—*
No. 3	1.35	"	—*
No. 4	1.35	"	—*
No. 5, Quality A	1.35	"	—*
Quality B	1.20	"	—*
Quality C	.95	"	—*
Old Manila Rope	5.75	"	—

* OPA Maximum Prices.

Foreign Rags

(F. o. b. Boston)

Canvas	(nominal)
Dark Cottons	(nominal)
Dutch Blues	(nominal)
New Checks and Blues	(nominal)
Old Fustians	(nominal)
Old Linsey Garments	(nominal)
New Silesias	(nominal)

CHICAGO

Waste Paper

(F. o. b. Chicago)

OPA Maximum Prices.

Shavings—			
No. 1 Hard White Envelope Cuts, one cut	3.37½	"	—
No. 1 Hard White Shavings, unruled	2.50	"	—
No. 1 Soft White Shavings	2.50	"	—
No. 1 White Ledger	2.17½	"	—
No. 1 Heavy Books & Magazines	1.57	"	—
White Blank News	1.65	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
No. 1 Assorted Old Kraft	1.75	"	—
Overissue News	.85	"	—
No. 1 News	.75	"	—
No. 1 Mixed Paper	.70	"	—
No. 1 Roofing Rags	1.55	"	—
No. 1 Roofing Bags	1.45	"	—